

Dissemination, Reception and Response to Chandigarh: Relevance of Modernism and Modern Architecture in India

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INTRODUCTION

In 1947, Nehru, the first prime minister of an independent India, commissioned the new town of Chandigarh. Chandigarh is the first example of a town consciously built where two cultures, the Indian and the Western, merged in urban areas under the relatively freer powers of post-colonialism, potentially cross-breeding the “modern movement’s”¹ town-planning and architectural ideas and elements with Indian ones. Earlier, under colonial powers, the colonists maintained control over western town-planning and architectural ideas, fusing Western and Indian ideas as they viewed them. However, despite the greater equality of power between Western and Indian cultures at independence, an inequality of knowledge between regional and western town-planning and architectural traditions created a Chandigarh that was only weakly hybrid.²

In this paper, I argue that the dissemination of Chandigarh’s “modernism” and “modern style” of architecture did not initially produce qualitative or relevant architecture and urban design in India. Instead, I argue, the cultural hybridism of the planned sector inhabitants of Chandigarh, analogous to the cultural blending of urban people in other Indian cities, produced conditions receptive for a relevant “modernism” and “modern style” architecture, merged with traditional and regional architecture. It is in the gradual response to ideas used at Chandigarh and their transformation for the planning and design of other Indian cities that more qualitative formal hybrids result with a greater balance of Indian and Western forces.

DISSEMINATION OF CHANDIGARIAN IDEAS

Nehru, a major voice in Chandigarh’s making, envisioned Chandigarh as a vehicle for national dissemination of knowl-

edge, particularly town-planning knowledge.³ The American Mayer team, the first town-planning team, ensured the diffusion of ideas by setting up a large Indian team that could absorb ideas from a few Western architects and town-planners; they also reversed the Indian/Western divide along implementation/creative lines created by the colonials by involving Indian counterparts in the design process. Their term was unfortunately too brief to have direct influence in the dissemination of knowledge; in the process, their approach, which differed from Nehru’s in that it developed valuable Indian cultural traditions as sources of strength, rather than chains of the past, fell short of true articulation.⁴

Corbusier’s town-planning principles combined with reactions to Indian sociologists’ and urban activists’ socio-pragmatic findings,⁵ formed the fulcrum for debate on urban design issues. All changes made by bureaucrats and local architects were in the functional and social arenas: greater density housing in phase two, and re-settling the massive rural influx into the city with land and workspace allotment. However, the local agents accepted Corbusier’s town-planning ideas passively, a reflection of their own inadequate exposure to alternate ideas. But it was also a reflection of their inter-action with Corbusier. Unfortunately, even for the short period that he was in India, Corbusier’s relations with the Indian team remained authoritarian; he continued to demand rather than explain his ideas to them.⁶ The Indian team came away from that interchange learning more about his ideas than about their relationship to the context of Chandigarh. This is apparent in the prominence given to the Chandigarh Edict and its precepts, on conspicuous display in the senior town-planner’s office, as the only official document for any outsider to study. Most of the precepts of Corbusier’s master-plan remain untouched – its division of the city into sectors, the width and speed of mechanized roads, an inverted neighborhood unit with no social streets on main roads, separation of urban institutions, and rigid maintenance

of architectural controls as they were previously developed. Corbusier failed to live up to Nehru's objective of a transfer of knowledge, because instead of giving the Indian counter-part planners at Chandigarh the kind of information that would help them decide what to do, his policy of doling out authoritative ideas bred dependence, initially leading more to assimilation than to hybridism within Chandigarh.

Consequently, alongside some planning legacies initially developed by the Mayer team that Chandigarians still enjoy, including the greening of the city, short travel distances, good infra-structural facilities and the development of traffic-free neighborhood units that carry through in the strategies of the Indian counterparts, the conflicts in Corbusier's strategies remain unresolved. Many of these discords have arisen due to Corbusier's overemphasis on many elements from the CIAM genre at the expense of elements from the regional genre, creating a palimpsest of conflicts between these two disparate needs: the possibility of compact regional neighborhoods with easily walkable distances in a hot, humid climate lost out to the universally sized neighborhood; fast-traffic streets erased the regional social street (fig.1); the use of a "universal" industrial imagery and rigid external architectural controls prevented local and regional associations as well as severely limited the agency of Indian artisans in a craft-based society to the inside of buildings; and climatic criteria overrode the ancient regional tradition of orienting the city and its sacred institutions in cardinal directions, a practice that allowed local people to develop a sense of direction. In addition, Corbusier's radical separation of motor and pedestrian, the use of single function streets rather than multi-function streets, and of a wide scale for streets rather than the more intimately sized pedestrian streets has led to a loss of all social function and visual interest on the main road network.

The planners of Chandigarh subsequently moved on to become planners of Punjab and Haryana. Chandigarh's planning has impacted other cities in India – New Delhi, Faridabad, many post-partition extensions to cities in Haryana and Punjab, and new townships (Gandhinagar Gujrat 1971, Vinzol township Ahmedabad, GSFC township Vadodra, IFCO township in Kalol, Shriharikota 1974-79.) All of them exhibit the unchanged precepts of Corbusier's master-plan. To a large extent, not much changed after Chandigarh.

In architecture, the initial exchange of ideas pivoted around Jeanneret, Le Corbusier's cousin who stayed on in Chandigarh after all the other western architects had left. During his later tenure, Jeanneret mentored particular Indian counter-parts, assigning to them many of the creative aspects of design. In the process, many of them picked up his approach towards architecture as a plastic art with a play of form, line and surface, producing a few interesting buildings in the 'modern' genre that use regional and modern responses to climate. Over time, some of the more thoughtful Chandigarh architects adapted many of

Corbusier's principles – the sculptural quality of concrete, the play of form in light and shadow, surface dressing, to produce some buildings that many Chandigarh architects are most proud of, such as IDBI housing (fig.1) in sector 38, and the PGI (fig.2), off main roads and not subject to architectural controls. Because of the break in the dissemination of Indian knowledge, these 'new' architects brought nothing that influenced their exchange with 'modern' ideas, thrusting the pendulum of hybridity towards its assimilation extreme.

RECEPTION OF CHANDIGARH'S MODERNITY

In the Indian-Western interchange, Chandigarian's culture converted to a hybridized one, with aspects of modernity becoming part of their cultural practices: the appropriation of mid-level technologies of the motor-car, air-conditioning and escalators by the middle and upper classes; the adaptation of concrete for roofs and columns that increased open spans, while rejecting it as climatically unsuitable for exterior finishes; and the reception to certain ideas. In particular, their positive



Fig. 1. IDBI Housing in Sector 38.

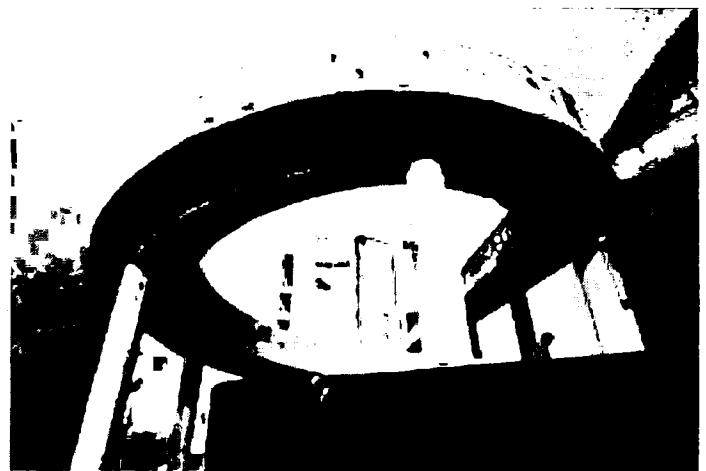


Fig. 2. PGI by B.P. Mathur.

reception for the environment of Chandigarh, to "modern" consolidated institutions, and to the "modern" style that fulfilled their psychological need to discard memories of an oppressive, violent past and begin anew, without comparison to or criticism from their colonial counterparts.⁸

For the Chandigarians, the pollution-free environment, open green areas, adequate infrastructure facilities, short traveling distances, and quiet, traffic-free neighborhoods are a necessary part of 'new' functional needs.⁹ The environment of Chandigarh has created a class of people who respond to its functions and who live here in significantly different ways from either large metropolises or medium regional cities that do not have the characteristics of environment similar to that of Chandigarh.

Chandigarians have, in turn, transformed the functional and social environment of Chandigarh. Functionally, they have added 'new' needs for a regional wholesale market, hospitals, and many more offices. Socially, they have resorted to resurgent needs-home-to-work distances are much shorter, with many people moving closer to work, and, in many cases, homes overlapping with work. Religious institutions, *yoga* centers, *satsang* halls, more *ghanjghars*, regional theatres, the informal sector *bazaar*, and squatter settlements have sprung up all over Chandigarh. Chandigarians, however, did not have a voice in the visuals of the masterplan, this aspect being controlled by the planning board. Their only transformation, in the poetic sense, was in renaming the streets in the city by giving them cardinal direction names (for example, *Purvi marg* or east street), or names of final destinations (for example, *Vigyan marg* or "knowledge street" – heading to the University), or a name that claimed ownership of Chandigarh (*Jan marg*, or people's street) leading up to the Capitol Complex; interventions that gave them new ways of creating a geographical sense of their city.

The "modern" style architecture shared a vocabulary of simple cubic forms and flat roofs with traditional housing in small towns. However, the images of modern housing are glaringly different from the regional genre in its repetitive, unornamented nature and use of material. In the regional genre, each house is additive and different from the other, while rich artisan's traditions like bracketed roofs, *chajja*, *gharoka*'s, and ornamental roof and terrace railing dictated a visual language that connected the units to each other (fig.3). And, the regional genres, instead of masonry and concrete, employ an abundance of wood craft-work in the form of delicately carved projecting verandah's, filigreed arch-work, and ornamental trellis work. Some challenges came from inhabitants of Chandigarh who built private houses without architects, using contractors. Within the constraints of the architectural controls, they have added ornamentation to their houses. After the 1990s, the elite have built houses in different styles with special attention to



Fig. 3. Street View in Lahore.



Fig. 4. Vernacular Housing.

more expensive materials, handcraft, and ornamentation (fig.4).

Chandigarh's monumental architecture, besides the Capitol Complex, filtered through Jeanneret's own aesthetic biases towards history, leaving out Corbusier's attempts at poetic cross-fertilization that drew inspiration from valuable past iconic Indian traditions. Consequently, the monuments of Chandigarh, through solitary 'modern' imagery, depart glaringly from traditional richly crafted, ornamented and sculpted carriers of meaning. Although the "modern" imagery serves the needs of lower and middle class Chandigarians of 'hope,' it does not cater to multiple audiences' needs for polygot messages, particularly those who want affiliation with their own traditions. Traditional architecture, such as religious structures, has only as recently as 1980 renounced 'modern' genres, built now as



Fig. 5. Mandir (temple) in sector 30.

well-crafted and ornamented buildings, with visual allusions to past religious structures in older towns, on internal streets not subject to Corbusier's architectural controls (fig.5).

The conditions of receptivity for "modern" style architecture and its transformation or rejection in other urban areas followed a different time frame, but, to an extent, the same social pattern. The appropriation of mid-level technologies, adaptation of new building materials, and positive response to certain ideas such as environmental factors impacted cities like Delhi and Bangalore, and modern institutions together with traditional ones formed the architectural vocabulary of all post-partition cities or city extensions. But that did not make the cities socially or visually viable. Socially, the celebration of fast-traffic routes cut such cities up into isolated islands. And visually, the scale, visual complexity, and form making of these cities lacks emphasis on civic architecture and creation of street-facades. After the 1980s, one change is apparent that separates elite tastes in other urban areas, whom, over time, became comfortable with their own traditions, from those in Chandigarh. For these urban elite, "modern" style architecture finally disassociated itself from allusions to "modernism". For the middle and lower classes, the visual association between "modernity" and the "modern" genre still remains. Also, some ethnic groups, such as the Jains in Gujrat, continue to share with the "modern" style a value for sparcity.

RESPONSE TO CHANDIGARHIAN IDEAS OUTSIDE CHANDIGARH

Earlier, in the 1960s, architectural debates severely challenged Public Work Department (PWD) architecture, and slowly, by the 1980s, housing earlier constructed by the PWD also became the arena of architect's architecture.¹⁹ Initially, some new work continued to work within the 'modern' town-planning fold to

deal more rationally with the problems at hand. A few new designs, beginning with housing complexes designed for middle-class clientele, share a development of sequential spatial experiences, an increase in density, and reclamation of pedestrian space and corridor streets, with an urban massing that emphasizes these streets and communal spaces. For example, Design Group's Sheikh Sarai (1963) and Yamuna Housing (1973-80), Correa-Sawhney's Tara Housing (1975-78) and Rewal's Asiad Village (1982) all in Delhi, are designed as low-rise, high density housing with central pedestrian communal streets and spaces for meeting places, with living areas and balconies overlooking streets. Much of this type of housing evokes the spatial morphology of old towns, and together with a recuperation of communal space characteristic of old towns, shifts the degree of functional and social hybridism closer to its Indian parentage. The imagery remains in the 'modern,' genre, with a pre-dominant use of masonry and concrete, and a cellular, repetitive pattern and, although more playful, catering to middle-class tastes. Correa-Sawhney's Tara Housing (fig.6) with its repetitive external staircases, cantilevered punctured windows, and concrete roof and lintel zigzag pattern is particularly aesthetically pleasing, the entire designed settlement small enough to add visual contrast to the rest of the city. The problem is that these housing complexes are still designed as islands in space, with most streets internal to complexes, and



Fig. 6. Tara Housing, New Delhi.

not effectively connecting them to the larger city. Reviving social and spatial traditions was not enough, in these cases, to create successful designs; at a minimum, social streets and accessible buildings should be part of an urban fabric.

After 1980, the work of leading Indian architects, part of India's intellectual elite, with exposure to other western strains of thought, reflects a committed examination of traditional towns; seeking precedents within that tradition, married with some lessons learnt from the fabric of Chandigarh at its point of insemination. In that response to both "modern" Western and Indian ideas, lies their recognition that the Indian populace, at least it's middle and upper classes in urban areas, is now undeniably hybrid, with differences between lower, middle and upper class economic consumption abilities, values, social customs, and tastes. Their challenge was how to bring it all together. Consequently, architects developed the ability to incorporate the strengths of Corbusier's modern planning—environmental planning, a concern for topography, sequencing of visual experiences, and symbolic representation. They also began to recognize weaknesses within his systems. Two examples of designs that revalued the regional morphology, urban design and housing typology that CIAM had pathologised,¹¹ mixed with different tenets from Chandigarh are Doshi's Vidhyadharnagar, near Jaipur (1990), and Correa's Bhagalkot, in Karnataka (1985).

Balakrishna Doshi, founder of the Ahmedabad School of Architecture, was Corbusier's protégé. He had worked in

Corbusier's atelier in Paris, and during that exchange developed his own poetic capabilities as an architect. By the late 1980s he was seeking planning inspiration from Indian "cultural heritage."¹² In Vidhyadharnagar (figs. 7), Doshi adopted some functional planning principles from Chandigarh—the division of the city into sectors, the use of neighborhood units with generous green spaces, ribbons of greenery, and orientation of buildings for maximum climatic advantage. Doshi also rejected CIAM's celebration of fast-traffic arteries: high speed automobile traffic encircles rather than divides the town, making the streets within far more pedestrian friendly and socially functional, similar to regional streets, therefore catering to the lower and middle classes for whom private transport is not a choice. The leisure resources of the city in the form of green ribbons that cut diagonally across a mainly square grid of streets recognize the strong relationship between people, gardens and the city. The main street of the city, as in Jaipur, contains in a pedestrian movement gradually ascending a central street as its collective ritual container, which opens into courtyards at rhythmic intervals, culminating at a symbolic fountain above the town.¹³ Inside the high-density sectors, the regional scale of communal courtyards and pathways takes over as one steps away from the street, just as it does at Jaipur, catering to daily rituals within these areas.¹⁴

Through the visual characteristics of Vidhyadharnagar, Doshi associated himself with rather than departed from regional traditions; the master plan and the housing typology stir up regional allusions; Vidhyadharnagar's square sectors evoke

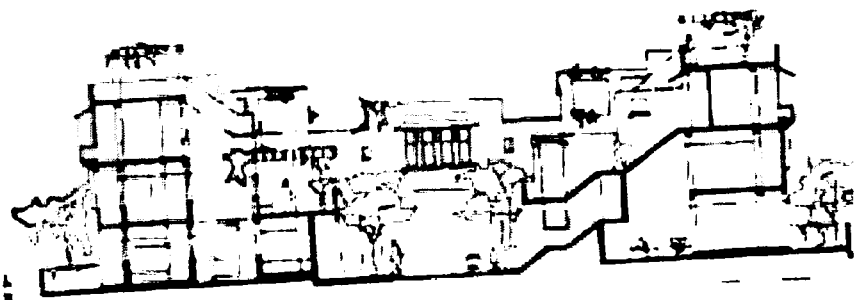


Fig. 7. Vidhyadharnagar, Rajasthan.
A-Layout
B-Sectional-Elevation of Housing.

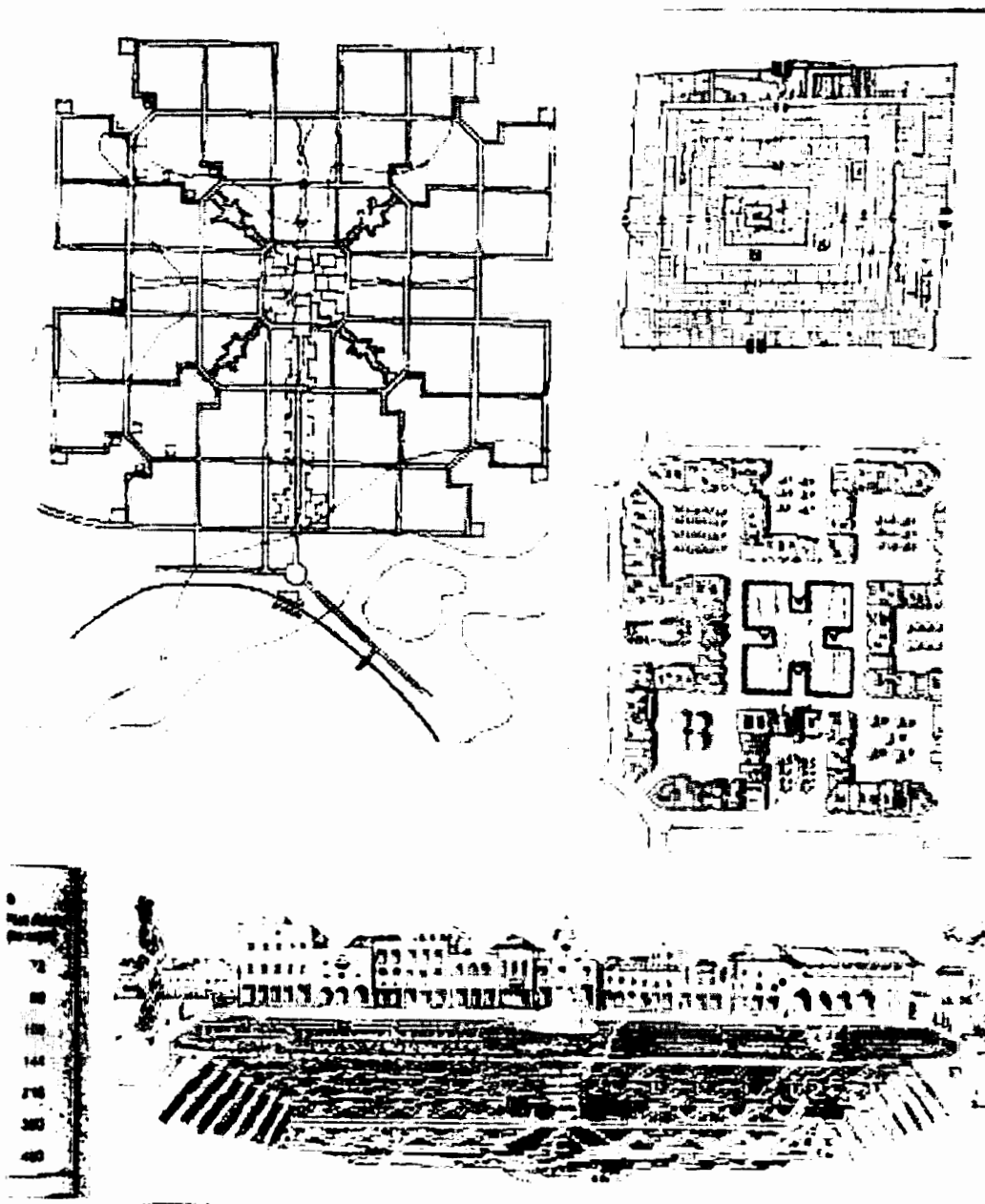


Fig. 8. Bhagalokot, Karnataka
 A-Srirangam Plan B-Bhagalokot Plan.
 C-Public Square layout D-Kund.
 E-Elevation of Housing.

Jaipur's square arrangement of the *mandala*, although they no longer follow one particular pattern. Variations in size and shape and angular streets, add to visual complexity, contra to CIAM-type visual monotony. In housing, the *jharoka* (protruding bay-window), with its sloped *chajja* (protruding elements over doors and windows) and chamfered sill bridging the main *darwaza* (door) opening into the courtyard, with its own chamfered edges, terraces and *verandahs* facing the street, exterior sculptural staircases, allude to regional elements. The cubic massing alludes to both regional elements as well as the

"modern" genre. The massing is, however, prototypically repetitive, bringing to mind 'modern' imagery.

Correa's, an Indian architect trained in America, 1985 plan for Bagalkot, in Karnataka (fig. 8), a town for 100,000 lower and middle class people, is a striking example of the marriage of functional rationale with a metaphysical one, recalling Corbusier's attempts at symbolic representation through the master plan. Pragmatic, pleasurable, metaphysical, and mythical qualities of open-to-sky space form Correa's architectural vocabulary.¹⁵ Correa's master-plan for Bagalkot recalls "the holy city

of Srirangam, built in concentric circles round the temple, a perfect manifestation of the ancient and mythic Vedic notion of the city as a model of Cosmos ... in the center of the town, representing *shunya* – the void, – is the *kund*.”¹⁶ The *kund*, or water-body, becomes a multi-coded symbol, both religious and secular, surrounded by major public buildings – civic, cultural, religious and governmental, forming the Civic Center. As in the ancient prototype, Correa oriented the city along the four cardinal directions, stressing the strong geographical sense of Indic cities.

Correa’s Bhagalkot works on a hierarchy of public and semi-public interconnected spaces, with a process of spatial sequencing similar to Chandigarh’s Capitol Complex. The *kund* and *chowks* (public squares) set up ample viewing distances that favorably present the buildings surrounding them, the scale reminiscent of Lima’s Civic Center in Peru, where Correa designed the Previ Housing project in 1969. The buildings surrounding the central square may vary, but an enveloping arcade provides physical and visual continuity. The special buildings, religious in nature, lie on north-south and east-west axis, positioned bisymmetrically from the center of the square and the *kund*. Over-scaled heroic statues stress these axes, in a return of the iconic sculpture that Corbusier abandoned at Chandigarh to city planning. Correa channeled movement from the Civic Center sequentially into the shop-cum-residence realm surrounding public *chowks*, which he connected via *darwazas* that act as thresholds to the public realm, with diagonal *bazaar* (shopping) streets that function as container streets and open rhythmically into semi-public *chowks*. The *chowks* in turn connect through the *bazaar* street and large, contained green *maidans* (large public open green space) to a surrounding green belt, incorporating the public leisure-ritual function of the city in an inter-connected manner.

At the semi-public to private level, Correa developed another hierarchy of social and visual sequencing, from the *verandah* or courtyard house to open-to-sky neighborhood communal spaces. In the tradition of ‘symbolic and pragmatic open-to-sky spaces,’¹⁷ he used the tradition of courtyards, *verandahs*, cubic massing, and terraces of that region, evoking the vernacular housing of old Bhagalkot. But the flat roofs and cubic massing, together with punctured openings and facades with chamfered corners simultaneously evoke ‘modernity,’ from the perspective of the lower and middle-classes. Correa used a pragmatic approach in developing the details of housing: exact income and profile of existing plots of people to be rehoused in Bhagalkot determine the detail high density texture of streets and open spaces within sectors, analogous to the existing town, with minimal semi-communal facilities in the center, including a temple. Correa has subsequently warned against the use of Chandigarh sectors for new lands because of all its inherent faults – its huge, unmanageable scale, division into four quarters by the *bazaar* and green strips, its undesirable low density, the anti-urban character of the bungalow in the middle of the

garden, and the inward looking nature of each sector, disconnected from the social street.¹⁸ Bhagalkot, however, does not cater to elite clientele, for whom the bungalow has itself become a “new” social custom, so Correa did not have to face the problem of integrating bungalows into a street system layout for a city. Rejecting the Chandigarh sector, Correa suggests a smaller size of 280 by 280 meters, similar to that in the Old Bhagalkot town, for the Bhagalkot sector; the *bazaars* and larger *maidans* are central to the town, yet placed close to sectors; densities are high, equivalent to those of old Bhagalkot. Correa used cellular housing patterns of exceptional ingenuity, multiplying modules for larger houses, forming a maze of streets and open areas, which suggest an urban character. Houses face onto the peripheral roads, which at 15 to 24 meters wide, are much narrower than the modern peripheral roads of Chandigarh, and include pedestrian sidewalks, which turn streets to seams rather than hems for sectors of the town.

Correa designed both the town and housing so that they could be built incrementally: the town concentrically as the need arose, and houses as simple rectangular shapes so that incremental changes can be made when economically feasible for the people. Correa’s extremely innovative projects, however, leave some of the ‘modern’ weaknesses experienced at Chandigarh, belonging to the universal tradition of urban design, unattended: a lack of detailed attention to urban growth and the unplanned sectors within the built-up sectors. These weaknesses are typified by a lack of flexibility – no vacant land near the public spaces or communal areas of the sector to allow for growth in a manner that could incorporate unforeseeable new needs and resurgent ones; a lack of legislative controls to provide against urban sprawl and visual chaos; and a failure to plan for fast traffic roads in or around Bhagalkot.

LESSONS LEARNT: DISSEMINATION, RECEPTION AND RESPONSE TO CHANDIGARH IDEAS

Nehru’s objective to treat Chandigarh as a vehicle for national dissemination of town-planning knowledge served exactly that function. The initial dissemination of Chandigarhian ideas shows the disastrous results of introducing Indian professionals too quickly to alien ideas, without the information to process and adapt these ideas according to their needs and at their own pace, and without the benefits of periodic revision. It seems tragic that the generosity of Jeanneret and Corbusier actually put Indian settlements at risk of poor urban design.

The longer-term response by architects to Chandigarh, however, is far more successful. Some Indian architects developed what was contextually sensitive at Chandigarh, together with other conduits of western thought, and fused these with valuable regional traditions as sources of strength from which to forge heterogeneous settlements. They seem to recognize that architecture and town-planning need to function within the

constraints of heritage and of society. Their response shifts the balance of the hybridity equation closer to the center. This response was only made possible because the social processes of inter-action between western and Indian cultures at independence created a hybrid middle and upper class clientele in urban areas. Doshi and Correa, in Vidhyadharnagar and Bhagalkot, cater to that hybrid clientele, but also cater to differences within the extreme range of hybrid clients: motor-car owners and pedestrians; those who are secular or religious; those who still associate "modernity" with the modern genre and those with more local or Indian tastes. In this accommodation, coupled with their architectural skills, is part of the success of Vidhyadharnagar and Bhagalkot as qualitative formal hybrids.

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NOTES

¹ The International Congress for Modern Architecture (CIAM) was founded in 1928 at La Sarraz, Switzerland, by a group of leading modern architects, with Corbusier as one of its leading members. The most important document to emerge from their pre-World War II meetings was the Athens Charter (CIAM 4: 1933), a set of principles of urbanism organizing planning into four key functions—dwelling, work, recreation and circulation. J.Ockman ed., "Reaffirmation of the Aims of CIAM," in *Architecture Culture 1943-1968*. (NY: Columbia University, Rizzoli, 1993). The "modern style" grew out of Western architect's attempts to find forms fitting an industrial age.

² See V.Kapur, *Dissertation: Learning from Chandigarh*. (University of Pennsylvania: 2001).

³ See R.Kalia. *Chandigarh: In Search of an Identity*. (Illinois: Illinois press, 1987).

⁴ For Mayer's strategies, see A. Mayer. "The New Capital of the Punjab." *Journal of American Institute of Architects*, v.14, Oct.1950. Nehru wanted Chandigarh to be "a new town symbolic of the freedom of India, unfettered by the traditions of the past...an expression of the nation's faith in the future..." with new symbols of a democratic free society that would replace the symbols of a colonial society. J.L. Nehru. *Hindustan Times*, (July 8, 1950).

⁵ By 1966, the Punjab University was a well established entity at Chandigarh. Victor D'Souza, the head of the department of Sociology, challenged, in *Social Structure of a planned City: Chandigarh*, what he perceived as the main discord behind the making of Chandigarh – that the planning was based on ideas of foreign experts shaped by experience in the West, not of knowledge and experience of local conditions. Madhu Sarin, a local architect turned urban activist, followed this survey with another, first published in 1974 as *Chandigarh as a Place to Live in*, in which she contrasted the assumptions in architects ideas with how they worked in reality. At the city level, both surveys questioned the issues of inadequate public transport public space amenities and densities, as well as the failure to anticipate the unplanned sector.

⁶ Interviews with P.C.Khanna, R.N.Dogra and Aditya Prakash in 1998, and comments by Jeet Malhotra made during the 1999 conference *Celebrating Chandigarh: 50 Years of the Idea* "Corbusier was so authoritarian. He wanted things done a certain way – his way."

⁷ See Lang, Desai and Desai, in *Architecture and Independence*. (Oxford: Oxford University press, 1997).

⁸ Interviews with old Chandigarians in January 1998. "We wanted to begin anew, to forget colonialism."

⁹ Interviews with Chandigarians in January 1999.

¹⁰ "The Housing and Urban Development Corporation in 1985 organized a conference in Delhi...attention was drawn to the poor quality of existing design and construction standards...there was a proposal to use the expertise of architects in the planning and development stage." Razia Grover, "Editorial." *Architecture + Design*, (Nov-Dec 1985).

¹¹ In line with the reevaluation by Aldo Rossi and Giorgio Grassi of traditional housing typologies, See L. Mumford, *The CIAM Discourse on Urbanism*, 269.

¹² "International models of architecture and urban planning were not suitable, given varying resources, climatic conditions, values and life-styles ... encouraged all societies to look at their own heritage to understand the architectural and planning practices which have evolved over centuries of adoption and adaption." B.K.Doshi, "Social Institutions and a sense of Place," in *Contemporary Architecture and the City Form: South Asian Paradigms*. (Mumbai: Marg publications, 1997).

¹³ F. Ameen. "The South Asian Paradigms," *Contemporary Architecture and the City Form: South Asian Paradigms*. (Mumbai: Marg publications, 1997), 5.

¹⁴ Ibid

¹⁵ B.V.Doshi, "modern times warrants cutting one's roots, cutting the umbilical cords ... of belonging, sense of identity, comforts and security of a familiar world." "Social Institutions and a sense of Place," *The South Asian Paradigms*, 13.

¹⁶ "Just as the pragmatic and pleasurable qualities of open-to-sky space that we discussed earlier seem to have remain undiminished, so also its metaphysical and mythical qualities as well." Charles Correa, "The Blessings of the Sky." *Charles Correa*, 28.

¹⁷ Charles Correa, "New Bhagalkot." *Charles Correa*, 180-185. The *Mandala* is a Cosmological diagram on which many layouts of South Indian cities in pre-industrial India were based. It represented making man whole again. The center of the diagram, was always occupied by an important social institution, usually the temple.

¹⁸ Charles Correa, "Celebrating Chandigarh: 50 Years of the Idea," at conference in Chandigarh in 1999.