

The Albert Mayer Team's Contributions to Chandigarh

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WHY CHANDIGARH?

Chandigarh, the first new town built in independent post-colonial India was commissioned in 1948, following on the heels of India's declaration as a Nation-State in August 1947. At independence, the British divided India into the two sovereign states of India and Pakistan along predominantly religious lines. The nucleus settlement, Chandigarh, served two purposes—to rehabilitate between half to one million Punjabi urban refugees uprooted from West Punjab, and a new capital to replace the loss of the previous state capital, Lahore, that went to Pakistan. The prime minister of newly independent India, Pandit Jawaharlal Nehru, played a dominant role in the shaping of Chandigarh. Nehru inducted the American Albert Mayer as the chief town planner of Chandigarh. Mayer brought in a team of specialists to help him; Mathew Nowicki was his chief architect. With the death of Nowicki in a plane crash in November 1950, the project was handed over to the French architect Le Corbusier in early 1951.

As the first new town in the post-colonial era, Chandigarh provides a rich case-study of architectural developments in a rapidly urbanizing India. It is the first example of a town consciously built where two systems, the Indic and the Western, already constituted relationally during the period of colonization, 1750-1947, entered redefined relationships under the relatively freer powers of post-colonialism, involving the interaction of two systems. Some theorists have defined the process as hybridization.¹ Chandigarh offers us a case-study to examine the opportunities as well as challenges, risks, and relevancy of hybridity, that is, as I define it, the deliberate appropriation of heterogeneous ideas across national and cultural boundaries, at the Eastern junction.

One fact in particular has enormous significance: in approximately the same time period, one dominant individual, Nehru, the first prime minister of an independent India, was instrumental in the making of both the newly independent nation and of Chandigarh. Therefore, my hypothesis is that the strategies that go into making the nation are analogous to those that shape the city. However, just as nation-making is a negotiation of interests, so also is the shaping of the town. The final product is different from what any single individual intended to happen. Mayer's town-plan was not put into practice in its entirety; Corbusier changed aspects of it. The population which would reside in Chandigarh had no formal input into its shape. In the interest of brevity, I examine merely some of Mayer's negotiations with the Indian political patrons, and pragmatic and socio-aesthetic strategies he used for the map-making of Chandigarh.

NEGOTIATIONS AND STRATEGIES

Mayer demonstrated a desire to help Indians in their city-planning ventures. In the interest of their benefit, he decided that a team of

specialists working together as co-authors, by broadening the skill pool for the project, would achieve maximum public good. The strategies developed for the masterplan are the coordinated effort of a team, headed by Mayer,² with noteworthy contributions from Stein and Nowicki, reflecting their pragmatic, social and aesthetic interests.

Mayer and Stein were members of the Regional Planning Authority of America, founded in the 1920s, with such figures as Patrick Geddes and Lewis Mumford as its members. This group shared a keen sense of social concern, public aims and issues.³ Mayer's team drew on the Geddes-Mumford intrinsic belief that, in the modern world, townplanning was a mixture of a universal approach and a local culture, fitted to time, purpose, and place.⁴ In this sense, they set themselves against CIAM's propensities towards a dogmatic universalism, based on rigid rules and principles, not approaches, that refused to acknowledge local and topical cultures.⁵ However, Mayer was faced with an inequality of knowledge between Western and Indian traditions. At independence, Indians lacked a knowledge-base of their architectural and town-planning traditions.⁶ Mayer also faced the challenge of a stress on speed and time to rehabilitate the Punjabi refugees.⁷

A City of High Technology vs. Low Technology

One of the team's trans-cultural approaches was to envision the city as a physical setting serving people's needs and desires, and the issue of technology was central to those needs. With regard to the question of appropriate technology, Mayer's philosophy differed drastically from Nehru's vision of the making of Chandigarh as part of the project of the making of the nation. Nehru saw threats from outside the nation,⁸ and desired to erase the material differences that led to India falling behind the West over the last two hundred years. To close this gap, he believed that the appropriation of high technology was essential. He desired a high technology nation with large-scale projects. Chandigarh is a compromise low-technology city that the paucity of available resources — power for industry and wealth— forced upon Nehru. Given Nehru's desires, he might have opted for a different city.

Mayer drew on Mumford's beliefs that rather than men serving technology, technology should be used in the service of man, in city planning and architecture. In addition, Mayer leaned more towards Gandhi, rather than Nehru, on the issue of the appropriateness of technology. Gandhi had identified technology as one of the main criteria that the colonialists had used to set themselves apart from the Indians. For Gandhi, the perspective in choosing appropriate technology was ethical rather than economic. He saw threats from inside. His basic idea was to impart self-respect and dignity, which required technology that people could afford and work comfortably with. He

envisioned India as a series of self-reliant village communities.⁹ Mayer drew upon this view and imagined a city of low infra-structural technology justified by India's resources. The contrast was with American cities dependent on high technology, with an architecture based on bold engineering, cantilevers, and highways. Accordingly, the residential city was conceived of as a horizontal city (houses limited to two or three stories), on a human scale, without the use of expensive elevators and expensive heating and cooling technology.

From 1850 onwards, traffic and efficiency became issues of importance in European and American town planning,¹⁰ linked to the move from low-technology, pre-industrial cities to high-technology, industrial cities in these countries. The traffic system designed by Mayer reflects a mixed technology. Mayer proposed five types of roads (fig.1) to separate different and incompatible tendencies, in order to meet both the existing conditions in India, as well as the emerging modern conditions.¹¹ Arterial roads linked Chandigarh to the rest of the nation. Sub-arterial roads, laid out on a 1500 x 1000 yard grid—consistent with pedestrian mobility—surrounding a district of three superblocks, were meant for fast auto and bus traffic. Each super-block was further sub-divided by two interior automobile roads, servicing the shopping center and other semi-public areas within the superblock. Bus-stops were at 1/4 th mile walks. The three road types catering to Indian conditions were for animal-drawn vehicles, cyclists and the pedestrians. A separate system of pedestrian, cyclist, and animal-drawn vehicle streets connected the main areas of the city, two in the N-S and in the W-E directions. Diagonal and looped local roads through the superblocks— narrow and winding, good for animal-drawn vehicles, cyclists and pedestrians, designed to discourage automobile traffic— supplemented these. Separation of these disparate elements were for the safety of the pedestrian, convenience of the automobile drivers, for relaxation and repose, avoiding bustle and noise, and also for avoiding the mishaps that occur when people not used to a certain technology have it thrust on them.

The idea of efficiency reflects CIAM's Athens Charter of 1920, developed for industrialized cities. Mayer accepted the manifesto's

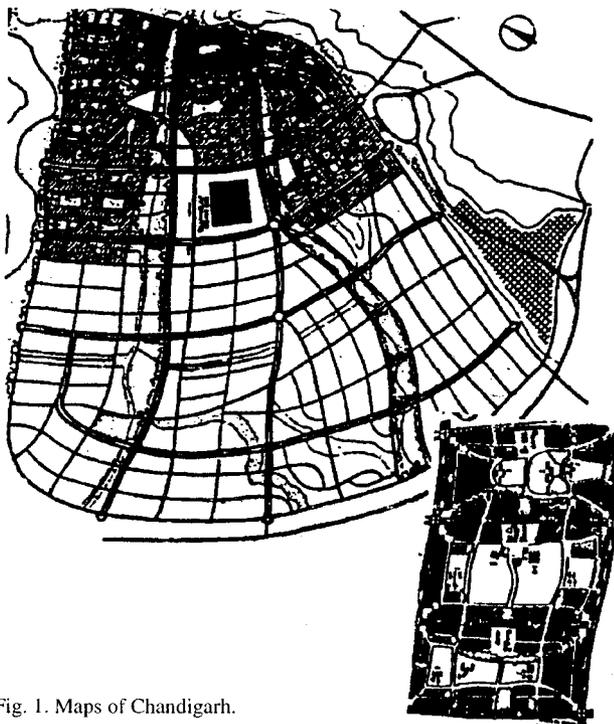


Fig. 1. Maps of Chandigarh.

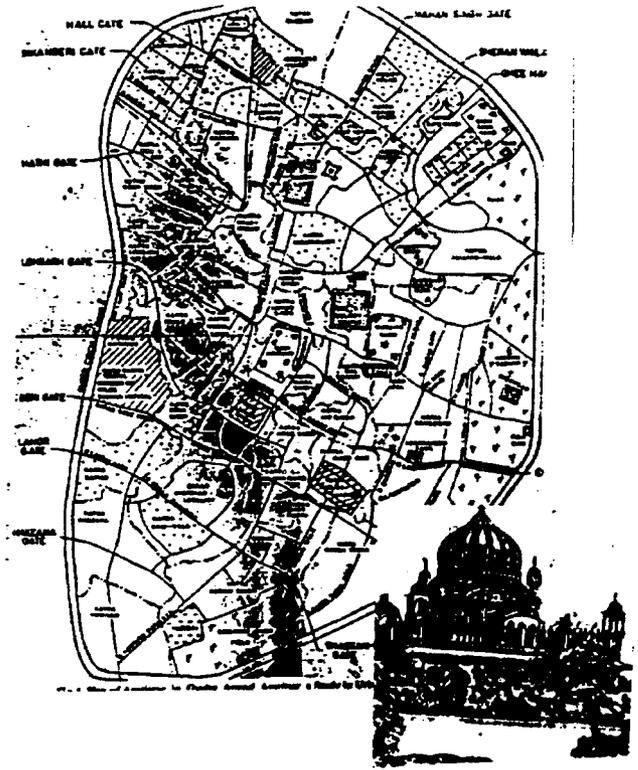


Fig. 2. Map and Gurdwara at Amritsar.

home/work/leisure divisions connected by a tissue of transportation. The main sources which draw traffic—the university, the Capitol Complex, the Railway complex and industry, and the Civic Center—were separated out and consolidated as sources of employment, in order to create central and efficient work centers, and to distribute the pressure of traffic on the roads. Mayer simultaneously also catered to local work habits of home/work overlaps in the main shopping and local shopping areas, with ground floors as shops and residences above. Mayer appealed to the Hindu-Sikh tradition of *lila*, where work is play, and play is work, with no rigid boundaries between the two.

Dialectics of Secularism and Religion

Another trans-cultural approach was to envision the city as a symbolic setting for the people it serves, with adaptation to setting and local landscape, and the design of buildings not as individual objects, but related to their surroundings. In this regard, Chandigarh was the shaped by the dialectics of secularism in the context of violence at independence; the exchange of Hindus/Muslims at partition was hurried, chaotic, and bloody, an enduring threat to national unity. At independence, avoiding economic, political and social de-stabilization and ensuring the unity of the country became an important need for the independent nation. Nehru's belief that secularism was the only policy that could hold a multireligious nation like India together was embodied in the design for Chandigarh. Accordingly, the public institutions given priority in the landscape and layout of the city were the non-religious institutions. The religious institutions lost their previous dominant role and location as in pre-colonial settlements. But Nehru was not averse to religious institutions; indeed, he believed in their necessity for the making of an ethical nation.

That Mayer gave physical form to Nehru's secular aspirations is evident when contrasted with traditional religious settlements. In traditional settlements of the Punjab, such as Amritsar, the temple,

the religious institution is the soul of the city. Analogous to the soul, it is placed at the center of the body, the center of the city. The belief in the spiritual importance of the body rather than its physical importance is within the Hindu tradition that Sikhism imbibed—a belief in *karma*, *moksha* and spiritualism. The plans of Punjabi cities such as Amritsar are all about a representation of this world-view. (fig.2)

Besides the contrast with the traditional, religious, Punjabi city, the contrast was also with the imperial city represented by colonial Delhi.¹² In colonial Delhi, the important structures in the center—the secretariat, administration and governors palace—were sublime symbols of imperial power and authority over the Indians (fig.3). As against the projection of imperial power and authority through symbols, Mayer sought symbols of a different type. Administration, justice, railways, industries, and education became the new symbols of a secular society.

Although Mayer rejected CIAM's rigid functional divisions, he accepted some of CIAM's poetic ideas—the importance of a symbolic heart of a city.¹³ In Chandigarh, the civic center—civic consciousness—was adapted to setting, located at its heart, its center, where the two main north-south axis cross the east-west one. The setting for the other secular monuments at places of aesthetic emphasis was extremely important. Mayer picked the site with the most dramatic natural qualities for the high court and Capitol Complex—a distinctive symbol of a new, free nation—the one framed by ridges and hills to the north and north-east, surrounded by a necklace of the waters of the Patiala Rao and Sukna Chao lakes, at the northern end of the city. At axial relationships to the two main north-south roads within the town, they were connected yet independent from the rest of the town, establishing the direction and main focus of interest. The railway and industrial units were placed at the east end of the vista along the main west to east axis. The university was to be located either at the extreme north near the hills, or half a mile south of the civic center, in one case, framed by the hills on a raised plateau, and in the other, where the vista along an important avenue formed a natural foci of interest.¹⁴

Nowicki, however, tried to re-introduce the representation of the spiritual body into the master-plan in a different manner; as a semi-public activity not sponsored by the State. The center of the super-

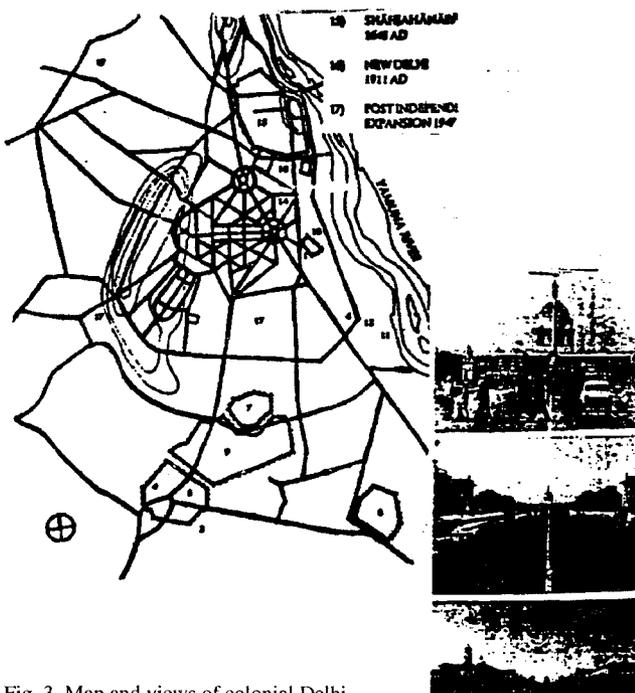


Fig. 3. Map and views of colonial Delhi.

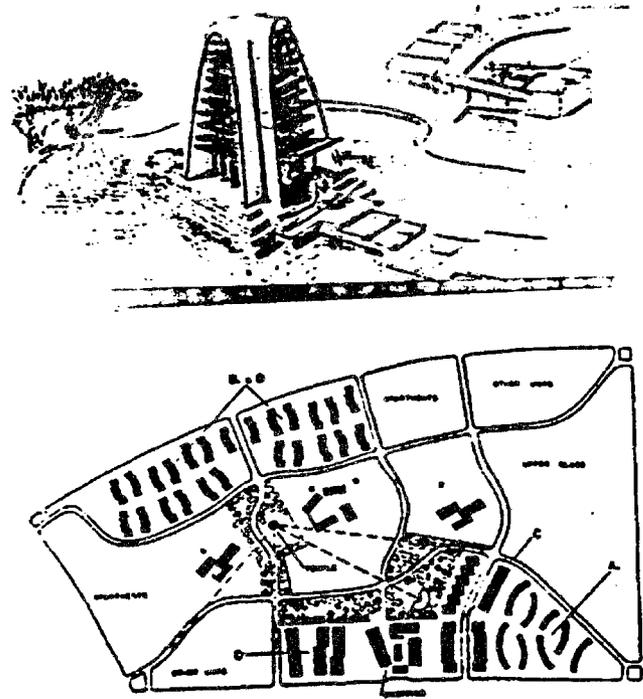


Fig. 4. Neighborhood Unit: Plan and Temple.

block was to house the worldly institutions of open plazas for meetings, school, auditorium, and library, but the pride of location was given to the spiritual institution, the temple or gurudwara (fig.4). These important buildings were to form a harmonious whole with regard for surrounding buildings and landscape, another trans-cultural approach articulated by Mumford.

The Holiday and the Everyday¹⁵

The simultaneous universal and particular approach was developed further by Nowicki, who classified the making of a city into two different functions: the everyday and the holiday. For Nowicki, the purpose of making a city was to serve the everyday function of working and dwelling, and the holiday function of recreation. Whereas the everyday function was responsible for the pattern texture of the city, the holiday function was responsible for the great scale composition of the city. The holiday function united the city, magnifying space, and required continuity of space rather than dividing the city into unrelated parts. This function, Nowicki believed, could be achieved through a continuous public park system, which depended on a mass pedestrian movement, and gave equal value to leisure and celebration. Nowicki believed that park system was also the proper setting for presentation of buildings, placed in picturesque settings or as terminal vistas, approachable by foot and cycle; and that he was catering to local culture because nature held a special significance for leisure activities for indigenous people of recent agricultural and rural backgrounds.

Nowicki also drew on Sitte's¹⁶ idea of creating festive, ornamental, plazas containing monumental buildings, sculptures and fountains that celebrated society's collective needs for play and adornment. He proposed the High Court Complex, the Capitol Complex, the Civic Center, Railway Station (figs. 5 & 6) and the University Complex as the monumental markers of Chandigarh. The aesthetics of these main festive complexes were to contrast with the residential neighborhoods. In the flat terrain, the tall monuments, symbols of aspiration, were to be visible from many points and considerable distances, to give its citizens a more definite idea of the town.¹⁷ And

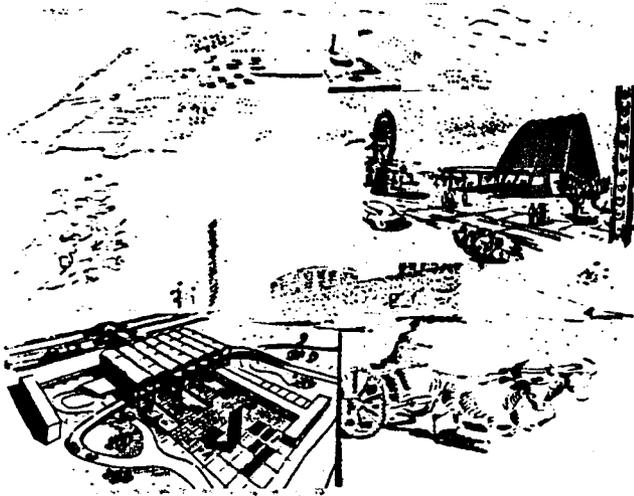


Fig. 5. Capitol Complex and Railway Station.

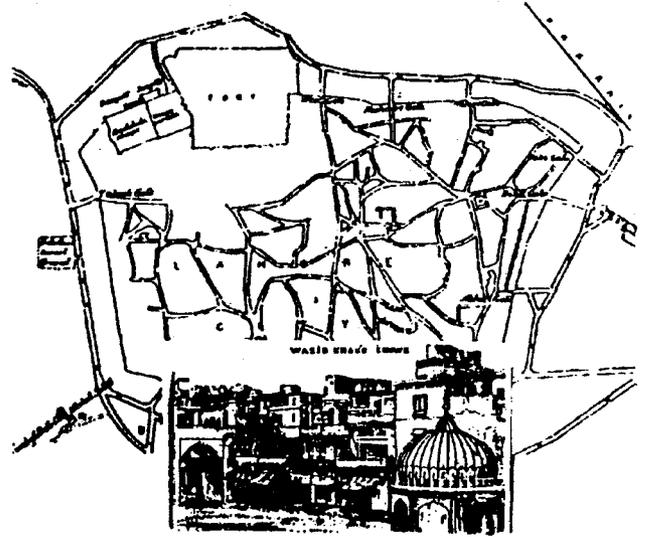


Fig. 8. Map and views of Lahore.

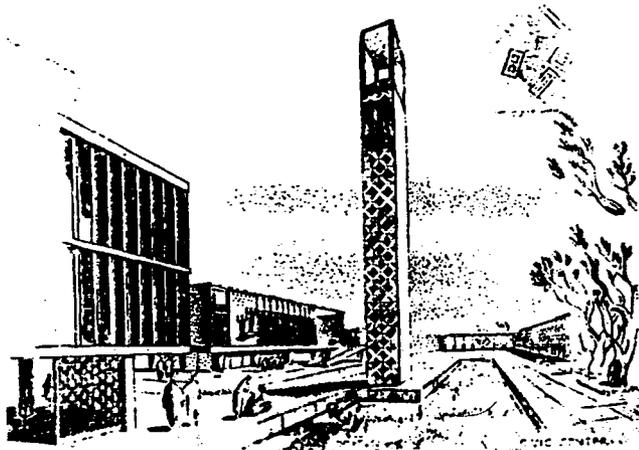


Fig. 6. Civic Center.

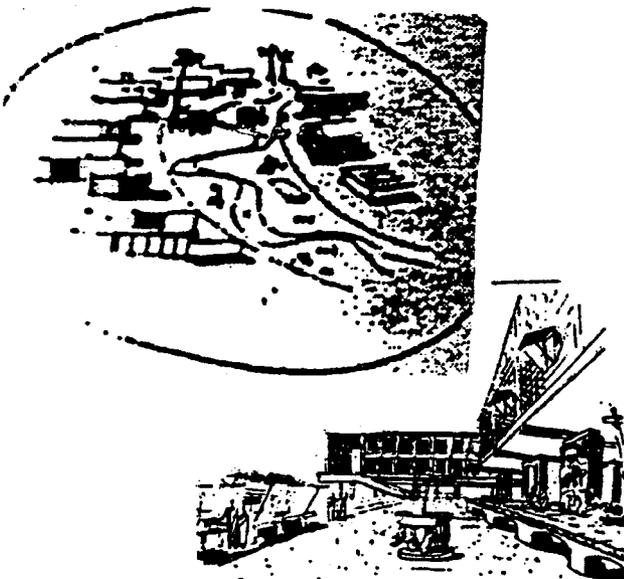


Fig. 7. Sketches of Leisure Valley-Bazaar.

each superblock was to share some distinctive feature so that people could orient themselves visually.¹⁸

Mayer identified three characteristics and desirable elements within the Indian holiday tradition—the baage-aaram, the bazaar and the sociable street; and one within the everyday tradition—the neighborhood unit.

Mayer wanted to develop a pedestrian open-air bazaar, intimate in scale, infused with traditional sauntering gaiety. Nowicki's proposal combined the main bazaar with the central park system. The bazaar took the shape of a series of destinations, as well as a link between destinations, empathetically analogous to the traditional bazaar, as in Lahore (fig.8). And as a physical and symbolic setting of life, the central, linear, traffic-free spine of the park system, bordered on both its sides by the bazaar, was to unite the city from South to North, with the Capitol Complex as its final destination; perhaps to cater to political rituals that an analogous axis at colonial Delhi did. It even included elements of the informal sector—temporary structures for itinerant hawkers (figs. 7).

Mayer envisioned a street life of lively sociability in the internal areas of the neighborhood unit, and proposed winding, intimately scaled, and varied pedestrian social streets, different within each neighborhood unit (fig.4). Winding streets may have been an attempt to tie into the association with indigeneous winding streets of Lahore. Intimacy of scale and pedestrianization of streets were to encourage face-to-face inter-action among the people.

The concept of the neighborhood unit is the one that is most developed by Stein and Mayer. Although Mayer used a concept—the neighborhood unit—that had been developed in the USA, he felt he was using Indian traditions. He validated employment of the concept by returning to Gandhi's ancient village communities as an alternative model.¹⁹ He imagined the city to be a place where various smaller groups—village communities—synthesize into a city.

The basic unit of design of the neighborhood unit is the community, and the city is interpreted as an integration of neighborhood community blocks, each of which builds communal unity through shared, semi-public activities (fig.4). The concept of communal unity reflects a convergence of ideologies, where Nehru's political interest of national unity and communal harmony, and Mayer's social interests in community building, come together. Mayer and the other members of the Regional Planning Authority of America also shared a value of inclusiveness specially slanted towards the interests of the middle and lower classes. This is expressed in the values attached to the spatial planning of Chandigarh in contrast to that of colonial Delhi.

Colonial Delhi was designed to suit the needs of the colonialists. Their priorities were security, comfort of the elite, control over the indigenous population, and a representation of the colonial hierarchy. Control over the indigenous population was maintained through a spatial division of Delhi into two settlements—one for the colonialists, and one for the indigenous population²⁰ (fig.3). Large estates from England were imported from England on a smaller scale onto a different land to express divisions of the elite and the indigenous populace.

As against the elitist, divisional, and individual values attached to colonial Delhi, Chandigarh is more egalitarian, relational, and communal. Divisions based on class economics were used to cut across ethnicity, caste and religion, a change in social organization that the clients had asked for, perhaps to diffuse the religious tension at partition. The neighborhood unit is a norm of middle-class and lower-class power in a democratic society, where conveniences are shared by many. For reasons of convenience and social cohesion, the neighborhood met all the needs and daily amenities of daily living. The core is designed for the family — children do not have to cross major roads for transportation in their daily lives of going to school and playing. Facilities were communal between families in a neighborhood unit. However, women's representation through communal support for child-rearing was not considered. Completely left out was a consideration of the non-planned sector—the construction workers, stationary and itinerant hawkers, auto-rikshaw pullers, and dhobis. But the idea of communal unity did tie into the Hindu-Sikh tradition of *bhai chara*—horizontal ties of co-operation.

OPPORTUNITIES, CHALLENGES, RISKS, IMPLICATIONS, AND RELEVANCY FOR THIRD-WORLD CITIES

Nehru's political ideology of nation-making—with high technology, secularism, and democracy—was an explicit factor leading to the material form of Chandigarh, but Mayers' team negotiated a city different from what Nehru had imagined. They negotiated a city of mixed technology, using a dialectics of secularism and religion for its making, and wanting to include elements from within local tradition. Corbusier introduced a discontinuity.

Is there a legacy in the examples studied? Because power and knowledge were aligned in dictating the outcome, it was possible for heterogeneous ideas to be appropriated across national borders. Mayer's team used the trans-cultural essentials of architecture—a well developed program of the city as a physical and symbolic setting of life; they attempted to juxtapose physical, social and aesthetic strategies which catered to the purposes, habits and desires of an industrializing nation, in conjunction with the needs and habits of the local population. This is an enormously important legacy. In addition, a very successful contrast was achieved between an imperial colonial society with its institutions, symbols of power and aesthetics and a democratic, secular society with its emphasis on communality and the power of the lower- and middle-class. A profound legacy that made such valid strategies possible was the teamwork that increased the skill pool, with subsequent interlinking of social, aesthetic, and functional needs; and an attempt to link these needs to local and national interests.

What were the risks and challenges in using "hybridity" for the making of Chandigarh? Besides an imbalance of power, a whole host of risks and challenges have contributed to a weakness in assessing the Indian side, and dominance of the Western side of the hybridity equation, in the context of a newly independent post-colonial nation—inequality of knowledge, challenges posed by speed and time compression, the making of a "new" town, and a rudimentary democracy.

Although Mayer's studies include attempts to define what is the best of local traditions in architecture—four characteristics, the holiday park, the neighborhood unit, the sociable street and the bazaar—they are limited by a lack of studies of local activities and

civic and ceremonial traditions, leading to a dearth of vivid poetic imagination and social elements from the indigenous population's view-point.²¹

For example, naming played an important poetic role. The naming of the squares, streets, and monuments in Lahore have a sensual or poetic quality beyond practical purposes. Tradesmen, food-caterers, musical instrumentalists and craftsmen occupy different sections of the bazaar, and streets and squares named after these functions—*churiwalabazaar*, *jauharbazaar*, *parathawalagali*—invoke an earthy, sensual, quality of the everyday world that involves all the senses with richness of smell, color, texture, touch, and sound. The naming of landmarks after heroic, folkloric or mythic figures such as Daroh's Mosque or Anarkali bazaar define sites around which religious and secular—popular theater—activities occur, which, together with the naming and iconological constructions of the landmarks, trigger the cultural imagination and allow the individual to transcend boundaries of time and place.

Similarly, the garden in traditional culture is not just a physical setting for sensual enjoyment, but has a symbolic element to it that reaches beyond the physical, such as the Shalimar garden in Lahore. It is representative of paradise—of earth, the intermediate state and heaven, represented by flowering trees, colors and smells. Similarly,

And, social streets and neighborhood units in the form of pedestrian spaces do not guarantee a harmonious communal society without a deep understanding of the particular communal values important for the indigenous community—language, religion, and professional interests, links strengthened by the strong glue of time. A work/home separation with consolidated functions of work catered primarily to a male work-force. The small size of the city with its short traveling distances consistent with indigenous mobility made the work/home/leisure divisions not so sharp as to create discomfort for this male population of the town; it did not serve the women working at home.

The addition of an anthropologist to the Mayer team might have addressed the inequality in the hybridity equation, with a careful study of local culture and society. The challenges of speed and time compression may have compounded the weakness in assessing the local side of the hybridity equation. This weakness was accentuated by the "newness" of a town—where everyone is a migrant and community relationships lack the glue that time provides. An oversimplification of the binaries holiday/everyday left out development of the diverse holidays in the everyday — the local need for forging common interests through common activities and focus on common histories, myths and memorabilia. A rudimentary democracy accentuated the weakness further; in its early stages of development, institutions that allowed broad representation were not there—neither the Punjabi migrants, nor women or the non-planned sector had representation.

Mayer's team was well aware of some of these risks, and wanted to build in safe-guards against them. They suggested institutionalizing a strong system of City Planning that would periodically review the master-plan, based on public understanding and acceptance. Nowicki suggested functional flexibility for future changes over functional exactitude. There was an open-endedness built into the project; it was left open for feed-back and introduction of feed-back into the loop of planning. The same open-endedness manifested itself in the physical master-plan of Chandigarh. The initial master-plan had all the road systems laid out, but was earmarked to be built only beyond the civic center. Even within the neighborhood units, space was left for the possibility of an infill based on future requirements. Unfortunately, Nowicki's death terminated Mayer's contract as well as the development of the strategies and sketches into three-dimensional urban form with detailed plaza groupings, street-scapes and typologies. Had Mayer's urban paradigms been developed, or his process of periodical review and functional flexibility put into practice, hybridity might not have been as close to assimilation as it presently is in Chandigarh.

There are far-reaching, significant lessons that one can learn from the making of Chandigarh, with implications for constructing urban structures in the Third World: the need to build a knowledge-base of indigenous traditions as well as institutions that afford broader representation, and a study of local needs. A lesson that can be drawn from Mayer's contributions is that in the frame-work of a rapidly industrializing new democracy operating under conditions of speed and time compression, it is mandatory to leave a greater measure of flexibility by not programming everything, leaving room for local and indigenous knowledge's to be built in. In a rudimentary democracy, the question of representation is troublesome. If earlier Punjabi migrants, women, and the non-planned sector were not taken into account, today, rural migrants find no representation. The relevancy of using urban paradigms without greater fusion with rural paradigms in the Third World where rural to urban migrations make the clear divisions of rural and urban models unfeasible, is questionable. How the particular question of representation is settled will have broad implications for most Third World cities, as the women enter the work-force and as the rural to urban migration continues. But the debate is about more than the use of "hybridity" as a promoting agent of change for urban cities in the Third World; it is about fulfilling the needs of most sections of society in the great modern-tradition, religious, man-woman, rural-urban divides in urban cities of the Third World.

WORDS

baage-aaram – Leisure Garden

bazaar – open-air market

karma – duty

Gurdwara – Sikh temple

churiwalabazaar – bangle market

jauharbazaar – Jewelry market

moksha – salvation

Mandir – Hindu temple

parathawalagali – stuffed wheat-bread street

dhobi – person who does laundry by hand.

Anarkali – Anarkali was prince Salim's nautch girl-friend. A tragedy, this one ended Anarkali being buried alive by the King because she would not forsake her love for Salim.

NOTES

¹ A post-colonial theorist, Fanon, has suggested that post-colonial societies go through three sequential phases, assimilation, rejection and hybridity, although other theorists believe that these phases might overlap or occur simultaneously. Bhabha analyzes that the pre-modern (pre-capitalist and pre-industrial) Eastern reaction to the modern (capitalist and industrialized) West was to become neither entirely Western nor entirely Eastern, but something else besides. F. Fanon, "On National Culture," in *The Wretched of the Earth*; H. Bhabha, "The Commitment to Theory," in *New Formations* 5.

² The qualities Mayer felt were essential for "outside" help were a high level of ability, sympathy and experience with, and a creative understanding of Indian conditions, traditions and architecture. Julian Whittlesy and Milton Glas were his partners, Clarence Stein a special consultant on aspects of town planning, Jim Buckley on city economics and transportation, Ralph Eberlin on utilities, roads and site engineering, Clara Coffey on landscape architecture, Landsberg on climate, and Mathew Nowicki a special architect. Mayer was deeply influenced by Gandhi's ideas of empathy for the people, and believed his own experience of living in India for an extended period of time as well as working on the rural pilot project Etawah, allowed him to mediate the town planning aspect. Nowicki, the architect Mayer introduced into the project, shared his attitude of sensitivity towards the people. Vol.9, Folder 35., Mayer Archives.

³ Geddes had worked in India earlier, and his sociological interests sharpened his sensitivity to the local ways of life. Mumford, a historian with a deep interest in the social and pragmatic view of urban planning, was conscious of the inventions in urban planning in the United States and in the Western world. Patrick Geddes.

⁴ Mumford articulated that uniformity was not universality. It was a one-sided, lop-sided universality. This and all further references to Mumford are from Mumford, Lewis. Preface and The Basis of Universalism. *Roots of Contemporary American Architecture*. The city that Mayer envisioned was to be: "modern, giving physical form to the aspects of civic design and city planning discovered in the last generation...avoid the excesses of hectic living and development that have accompanied modern work... and take account of basis eternal and architectural relationships that are found in the best Indian works...and in the exemplars everywhere" Vol. 18, fldr. 31. Mayer Archives.

⁵ The International Congresses for Modern Architecture (CIAM) were founded in 1928 at La Sarraz, Switzerland, by a group of leading modern architects. The most important document to emerge from their pre-World War II meetings was the Athens Charter, a set of principles of urbanism organizing planning into four key functions—dwelling, work, recreation and circulation. Sigfried Giedion was the leading organizer of CIAM, while Walter Gropius and Corbusier were two of its leading members. Of course, CIAM did not present one uniform view-point. It is Corbusier's view-point that I represent here: "Town Planning, as a branch of sociological research, required examination in properly equipped laboratories, of which several have been established in different parts of the world over the last 50 years. There have been many publications on the subject, but, unfortunately, most of them treated local conditions and topical problems." Corbusier saw Chandigarh as a culmination of CIAM's efforts, supported by United Nations, to unsuccessfully put its principles of 'development' into practice—especially CIAM 7's principles and grids, using universal functional, climatic, and traffic grids as well as an aesthetic three-dimensional approach as tools to develop a master-plan Le Corbusier. Planning Commission meeting, 17th April, 1952. Randhawa papers.

⁶ There was one book published in 1892, *History, Architectural Remains and Antiques of Lahore* by M. Latif, a local inhabitant of Lahore, which may have helped in understanding the indigeneous population's view-point, but there is no mention of it in the Mayer archives. An oral tradition of townplanning existed with the shapatas, the architect-masons of South India, (See Dutt, *Town Planning in Ancient India*) but they were not consulted as an information source. In addition, town-planning was reserved for the British, and a mere handful of Indians were inducted into the British system of learning architecture, limiting knowledge about town-planning to the British. (See Bhatt, Vikram. *After the Masters*). It seems that the induction of British townplanning and architecture into India disprivileged the other system, as well as created creative/implementation divisions of labor along British/Indian lines.

⁷ "Tangible results are expected within a short period of time to rehabilitate the refugees." letter from secretary of Government of India to US Embassy at Washington, folder 30, Mayer Archives.

⁸ "In the context of a modern world, no country can be politically and economically independent within the framework of international interdependence unless it is industrialized and has developed its power resources to the utmost...industrialize or submit to foreign economic penetration or political interference's..." J.L. Nehru, *Discovery of India*, pp. 338, 193.

⁹ M.K. Gandhi, *Hind Swaraj*. Gandhi's was not a nativist project. He drew on H. Maine's ideas of village communities (See G. Prakash, *After Colonialism*), and John Ruskin's ideas of the importance of care for the people. (See *Unto Thy Last* by Ruskin, J.). A master of symbolism, Gandhi envisioned these villages to be symbolized by the spinning wheel (the charkha).

¹⁰ L. Benevolo, *Origins of Town Planning*.

¹¹ "We know that the nature and volume of traffic will undergo a far more radical change in countries like India...as seen in cities like Bombay and Delhi." The justification he gave in raising the existing level of technology—although still adopting a low level of technology by Western standards—was to incite desire in the people so that they would make innovative strides in shaking off the burden of poverty that they so easily accepted. Mayer, A. in folder 30, Mayer Archives.

¹² The aesthetics of the master plan reflect a convergence of Mayer's poetic ideology with that of Nehru. Both men expressed a distaste for the aesthetics of colonial authority and separatism represented by colonial Delhi. For Nehru, colonial Delhi was without heart and soul. Nehru, J.L. Speeches 49-53, article "Past and Present," p.390.

¹³ See *The Heart of the City*.

¹⁴ Mayer, A. folder 30, Mayer Archives.

¹⁵ This section refers to Nowicki, M. Letter to Mayer, early 1950, vol.19, fldr.14, Mayer Archives.

- ¹⁶ In the context of building the Ringstrasse in Vienna, Sitte in the 1900's argued that the pleasure derived from traditional architecture and modern needs of traffic, hygiene and efficiency were not necessarily in conflict. Sitte argued that the inner plazas could retain their festive, ornamental value, as could the inner picturesque, winding, corridor streets. C. Sitte, *City Planning According to Artistic Principles*.
- ¹⁷ A. Mayer, "Aesthetic criteria: significant places for emphasis, end of a vista, important intersection, the point of high elevation"; "A Technique for Planning Complete Communities," in *Architectural Forum*, vol.66, nos.1 (January): p.136.
- ¹⁸ Mayer, A. folder 30, Mayer Archives.
- ¹⁹ For details of the neighborhood unit developed in USA, see C. Stein, *Towards New Towns for America*. Mayer felt that the concept of the neighborhood unit was "more valid in India where most people are still villagers and small-community people at heart, and fairly recent by origin". Mayer, A. JAIA, October 1950, p.174.
- ²⁰ A.D. King, *Colonial Urban Development*, pp.130-135. pp. 241-255. The presence of the military cantonment provided that security, and the presence of polo clubs and golf clubs in the heart of the city provided comfort for the elite. Only two types of Indians were housed in the colonial settlement, from the two extreme ends of the indigenous hierarchy—the rajahs and the servants. Variation in the size of the compound of a single colonial family represented colonial hierarchy; in accordance with the occupants position in the hierarchy of the colonial community from senior officer to clerk, the sizes varied from 6 acres to 1 3/4 acres. For the officer's quarters, all the conveniences and the servants were hierarchically arranged within the territory
- ²¹ For interpretation of indigeneous traditions, I have referred to Mohammed Latif's book: *Lahore, its History, Architectural Remains, and Antiquities*.
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FIGURE CREDITS

- Fig.1. Maps of Chandigarh, in Norma Evenson, *Chandigarh* (Berkeley: University of California Press, 1993).
- Fig.2. Map and views of Amritsar, in Anand Gauba, *Amritsar, a Study in Urban History* (New Delhi: UBSPD, 1998).
- Fig.3. Map and Views of Colonial Delhi, in R.G. Irving, *Indian Summer* (New Haven: Yale University, 1981).
- Fig.4. and Fig 6, Neighborhood Unit: Plan and Temple / Railway Station, Civic Center, in Lewis Mumford, "Nowicki's Ork in India," *Architectural Record* (September 1954).
- Fig.5. and Fig. 7 Capitol Complex, and Leisure-Valley-Bazaar in Schafer compiled, *The Writings and Sketches of Mathew Nowicki* (United Press of Virginia, 1973).
- Fig.8. Map and Views of Lahore, in Mohammed Latif, *Lahore, its History, Architectural Remains and Antiquities* (Pakistan: Lahore Publishers, c.1956 [1892]), and Samina Qureshi, *Lahore: the City Within* (Singapore: Concept Media, c.1998).