Spring 5-4-2018

[Re]Defining Chandigarh

Dhruvee Patel

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[Re]Defining Chandigarh
[RE] DEFINING CHANDIGARH

Request for Approval of Thesis Research
Project Book Presented to:

Professor Ameen Farooq
Professor Peter Pittman

and to the
Faculty of the Department of Architecture
College of Architecture and Construction Management

by

Dhruvee Patel

In partial fulfillment of the requirements for the Degree
Bachelor of Architecture and Honors Program

Kennesaw State University
Marietta, Georgia
Spring 2018
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DESIGN THEOREM
Introduction

According to the historical records, Chandigarh was occupied by Harappans, one of the oldest civilizations in the world nearly 8000 years ago specifying the importance of cultural and historic meaning that the place of Chandigarh holds in India. It was during the separation of India and Pakistan that the state of Punjab got divided into two parts and the capital of the Punjab state was Lahore. Chandigarh, the city of Chandigarh was born. The city derives its name from the temple of "Chandi Mandir." In 1966, due to linguistic problems, the state of Punjab got divided into two parts namely Punjab and Haryana. Thus, Chandigarh became the capital of two states and a Union Territory in India. This research aims to revisit the planning structure of Chandigarh as it is connected to the environment physically, socially, and politically with a built environment that reflects the spirit and time of place in which the people of Chandigarh live. It is about reassessing the city of Chandigarh in terms of vision and the demands of the client, Prime Minister Jawaharlal Nehru and the way it is fulfilled by architect, Le Corbusier and his team.

History of Evolution

New Capital for East Punjab

After the division between West and East Punjab while Lahore went to West Punjab, the East Punjab in India was left with utmost chaos. It was a separation of religion based on land as Pakistan became a country for Muslims and India became one for Hindus adding to the social and cultural chaos in the region. As Kalia (1999) specified, “between 1947 and 1951, 6.2 million Muslims left India for Pakistan and 7.5 million Hindus and Sikhs came from India to Pakistan” (p. 1). Hence, a new capital was needed to rehabilitate refugees along with the displaced Punjab government. The establishment of a new capital was more of a political move since, it was supposed to fulfill deep-rooted psychological needs and meet pressing political exigencies then facing India (Kalia, 1999, p. 1). It is evident through this statement that the need for a new capital was not only to prove not only to others but also to itself that India can overcome anything and will not let this division affect its people for much longer. Along with this, the governor of East Punjab noted, “the new capital would be the nerve center of the province, and from it would flow life and activity through the province” (Kalia, 1999, p. 9) indicating how it must be more of a physical, social, and cultural move than just political. In order to decide a site for the new capital, certain characteristics were listed that one envisioned the future capital of East Punjab to possess. For instance, it should have “1) strategic and military security against the neighboring hostile state of Pakistan, 2) adequate space for new government machinery, for refugees, and for future expansion, and 3) the potential to replace the material and psychological loss of Lahore…” (Kalia, 1999, p. 3-4). In this manner, one can see how the new capital had to be politically and physically capable of handling the demands of the government and the people. It was also expected that the new capital can be connected to other cities in East Punjab through rail, road and air while forming a network for people to ease into without creating pressure on one city. Due to excessive bureaucratization and constant conflict between India’s regional and local government, it was hard for the government to come to any conclusion on where to choose the site and what to do next. Upon this, the governor of East Punjab wrote to the government of India stating, “big business and industry uprooted from West Punjab are already leaving East Punjab, and if the capital project is not proceeded with immediately, all business and industrial talent and enterprise... would be lost permanently to our province” (Kalia, 1996, p. 10-11). In response, Prime Minister Jawaharlal Nehru wrote, “right from September 1947 the government of India has been taking great stress on the agency of this matter from every point of view, practical as well as psychological... I think this is very bad... for East Punjab” (Kalia, 1996, p. 10). Through these statements, it is apparent that East Punjab was in dire need of a new capital not only for the psychological aspect of people but also for the physical and political aspects of business. Hence, the next task was to find a site that would be appropriate for a new capital for the East Punjab as a fitting reply to the loss of Lahore, prior capital of Punjab.
Chandigarh as Site

Based on the condition of India, the government of India decided to open a new capital for East Punjab. But upon analyzing it, it became apparent that Shimla was on the border with limited accessibility and lacked the situation for a large-scale city. Moreover, it is a natural basin or depression where there is a steady rise in water table for past two decades along with poor drainage system making it more expensive to add the infrastructure (Kalia, 1999, p. 30).

Hence, it was implied that the government of East Punjab should consider the idea of a new capital city. The government of East Punjab started to look at different possibilities of sites which could be turned into a new capital city. Ludhiana and Amritsar were considered for this purpose, but there were various factors which made these cities not suitable for a new capital. Ludhiana was eliminated due to the absence of highly connected road network (Kalia, 1999, p. 6). In addition to this, Ludhiana also had poor communication facilities with the absence of railway lines, which made it difficult for people to move in and out of the city (Kalia, 1999, p. 7). Ludhiana also did not have enough space to accommodate 4,00,000 people just like Shimla. Thirdly, Amritsar also did not have enough space to accommodate 4,00,000 people in the race of new capital city (Kalia, 1999, p. 9).

Jalandhar (Jullundur) was selected after analyzing it, it became apparent that Shimla was on the border with limited accessibility and lacked the situation for a large-scale city. Moreover, it is a natural basin or depression where there is a steady rise in water table for past two decades along with poor drainage system making it more expensive to add the infrastructure (Kalia, 1999, p. 30).

In this manner, one cannot say that the current plan of Chandigarh is a modern city, he still wanted it to be site-specific representing the culture and community of India. Since, as a true culture derives its inspiration from every corner of the world, but it is the home-grown and...be based on the true culture of the people. This is evident when he says, "there can be no real culture or spiritual growth based on imitation..."

Furthermore, it is a natural basin or depression where there is a steady rise in water table for past two decades along with poor drainage system making it more expensive to add the infrastructure (Kalia, 1999, p. 30).

Architects for Chandigarh

After selecting the site, the two men who visualized the project were F. L. (P. L.) Thapar, a member of the Indian Civil Service, who became administrative head of the Capital Project in 1949 and P. N. Thappar, "a member of the Indian Civil Service, who became administrative head of the Capital Project in 1949" (Kalia 14).

In general, Chandigarh seemed closest to Chandigarh from the start in building the design of the city. "Nowicki and Nowicki, not two of the original designers, were hired Le Corbusier, his cousin Pierre Jeanneret, and a couple from Britain, Jane Drew and Maxwell Fry. In the master plan and Nowicki works with him to plan the rest in detail. With the unexpected death of Nowicki in 1949 due to the lack of Koenigsberger’s "primary training as an architect and not as a town planner, and his difficulty in not having his own planning unit" (Kalia, 1999, p. 32). Albert Mayer decided to work with Nowicki about the project and both willing to work on it, the commission was awarded to Mayer on December 15, 1947 and on February 1, 1950 due to high expenditure. As a solution, Fletcher proposed to send one of the Chief Architectural Officers of England in search of a suitable bud for the project. Upon this, the project was practical and did not include the expenses and delay in the project. "It was not to come in your way in this matter. But we can not..." (Kalia, 1999, p. 27). The statement clarifies that even though the city was to be designed in the city, the idea was to create the city using the culture and community of India to build the city. The city is a symbol of nation’s faith in future but still representing India and the people of India in terms of culture and social hierarchy. "You can see no real culture or spiritual growth based on imitation..." (Kalia, 1999, p. 28).

However, the city was not only about the architecture and design, the city was more than that. The city was a symbol of India and the people in terms of culture and social hierarchy. "You can see no real culture or spiritual growth based on imitation..."

In this manner, one cannot say that the current plan of Chandigarh is a modern city, he still wanted it to be site-specific representing the culture and community of India. Since, as a true culture derives its inspiration from every corner of the world, but it is the home-grown and...be based on the true culture of the people. This is evident when he says, "there can be no real culture or spiritual growth based on imitation...

Baker and said, “this is attractive in a way, but most inconvenient and most un-Indian” (Kalia, 1999, p. 27). The statement clarifies that even though the city was to be designed in the city, the idea was to create the city using the culture and community of India to build the city. The city is a symbol of nation’s faith in future but still representing India and the people of India in terms of culture and social hierarchy. "You can see no real culture or spiritual growth based on imitation..."

However, the city was not only about the architecture and design, the city was more than that. The city was a symbol of India and the people in terms of culture and social hierarchy. "You can see no real culture or spiritual growth based on imitation..." (Kalia, 1999, p. 28).
Le Corbusier would not be able to design a city which represents the culture of the society and yet be modern. Le Corbusier probabilistically working on the urban project based on the concept of the city on four major functions like living, working, care of body and mind, and spirit; and circulation. The living and the residential sectors, the working in the capital complex, city center, education and industrial areas, care of body and mind in the health sector, and spirit, the circulatory system in the network of roads. The idea of Chandigarh was a project model based on the city of Chandigarh, India. According to Nehru, the aim was “to utilize [Western technology] and fit it into Indian resources” (p. 87), which could be very appealing to Nehru who has envisioned the working is the capital complex, city center, education and industrial area; care of body and mind and spirit; and circulation. The living are the residential sectors, the working in the capital complex, city center, education and industrial areas, care of body and mind in the health sector, and spirit, the circulatory system in the network of roads.

The shape for the assembly hall was inspired by the Buddhist Stupa at Sanchi showing cultural influences of the region. The shape for the assembly hall was inspired by the Buddhist Stupa at Sanchi showing cultural influences of the region. The shape for the assembly hall was inspired by the Buddhist Stupa at Sanchi showing cultural influences of the region. The shape for the assembly hall was inspired by the Buddhist Stupa at Sanchi showing cultural influences of the region. The shape for the assembly hall was inspired by the Buddhist Stupa at Sanchi showing cultural influences of the region. The shape for the assembly hall was inspired by the Buddhist Stupa at Sanchi showing cultural influences of the region. The shape for the assembly hall was inspired by the Buddhist Stupa at Sanchi showing cultural influences of the region. The shape for the assembly hall was inspired by the Buddhist Stupa at Sanchi showing cultural influences of the region. The shape for the assembly hall was inspired by the Buddhist Stupa at Sanchi showing cultural influences of the region. The shape for the assembly hall was inspired by the Buddhist Stupa at Sanchi showing cultural influences of the region. The shape for the assembly hall was inspired by the Buddhist Stupa at Sanchi showing cultural influences of the region. The shape for the assembly hall was inspired by the Buddhist Stupa at Sanchi showing cultural influences of the region. The shape for the assembly hall was inspired by the Buddhist Stupa at Sanchi showing cultural influences of the region. The shape for the assembly hall was inspired by the Buddhist Stupa at Sanchi showing cultural influences of the region. The shape for the assembly hall was inspired by the Buddhist Stupa at Sanchi showing cultural influences of the region. The shape for the assembly hall was inspired by the Buddhist Stupa at Sanchi showing cultural influences of the region. The shape for the assembly hall was inspired by the Buddhist Stupa at Sanchi showing cultural influences of the region. The shape for the assembly hall was inspired by the Buddhist Stupa at Sanchi showing cultural influences of the region. The shape for the assembly hall was inspired by the Buddhist Stupa at Sanchi showing cultural influences of the region. The shape for the assembly hall was inspired by the Buddhist Stupa at Sanchi showing cultural influences of the region. The shape for the assembly hall was inspired by the Buddhist Stupa at Sanchi showing cultural influences of the region. The shape for the assembly hall was inspired by the Buddhist Stupa at Sanchi showing cultural influences of the region. The shape for the assembly hall was inspired by the Buddhist Stupa at Sanchi showing cultural influences of the region. The shape for the assembly hall was inspired by the Buddhist Stupa at Sanchi showing cultural influences of the region. The shape for the assembly hall was inspired by the Buddhist Stupa at Sanchi showing cultural influences of the region. The shape for the assembly hall was inspired by the Buddhist Stupa at Sanchi showing cultural influences of the region. The shape for the assembly hall was inspired by the Buddhist Stupa at Sanchi showing cultural influences of the region. The shape for the assembly hall was inspired by the Buddhist Stupa at Sanchi showing cultural influences of the region. The shape for the assembly hall was inspired by the Buddhist Stupa at Sanchi showing cultural influences of the region. The shape for the assembly hall was inspired by the Buddhist Stupa at Sanchi showing cultural influences of the region. The shape for the assembly hall was inspired by the Buddhist Stupa at Sanchi showing cultural influences of the region. The shape for the assembly hall was inspired by the Buddhist Stupa at Sanchi showing cultural influences of the region.
In general, it seemed like Chandigarh was heavily influenced by the social, cultural, physical, and political aspects of India from its birth to its existence at the moment. One of the questions that arise is if architecture reflects society and culture then, is Chandigarh a successful project or a failed experiment? Should we blindly keep transferring the idiom “Modernism” or should we think about how to actually translate it considering the culture and society of people? Was Le Corbusier right in designing Chandigarh? If not then, what should Chandigarh be like? How to redefine Chandigarh? If yes then, in what scale like city, district, or building? Hence, in this manner, the research alludes the need for social and cultural aspects to be embedded into Chandigarh to be more responsive to the people of the region while becoming a true symbol representing India in the modern times.
CHANDIGARH IN GLOBAL CONTEXT

NEOCLASSICISM

1793
City Beautiful

1802
Garden City

1817
Garden City

1824
Villa Radieuse

1828
CIAM

1847
Futurism

1852
Modulor

1860
Chandigarh

FUNCTIONALISM

1859
Garden City

1893
City Beautiful

1902
Garden City

1914
Futurism

1917
CIAM

1924
Villa Radieuse

1928
Art Deco

1932
Broadacre City

1935
Futurism

1949
Neo-Futurism

1950
Modulor

1960
Chandigarh

MODERNISM

1962
IMAG

1963
Futurism

1966
Neo-Futurism

1970
Metabolism

1974
Landscape Urbanism

2009
Ecological Urbanism

POSTMODERNISM

1893
City Beautiful

1902
Garden City

1914
Futurism

1917
CIAM

1924
Villa Radieuse

1928
Art Deco

1932
Broadacre City

1935
Futurism

1949
Neo-Futurism

1950
Modulor

1960
Chandigarh

1962
IMAG

1963
Futurism

1966
Neo-Futurism

1970
Metabolism

1974
Landscape Urbanism

2009
Ecological Urbanism

1802
Garden City

1817
Garden City

1824
Villa Radieuse

1828
CIAM

1917
Futurism

1924
Villa Radieuse

1928
Art Deco

1932
Broadacre City

1935
Futurism

1949
Neo-Futurism

1950
Modulor

1960
Chandigarh

1962
IMAG

1963
Futurism

1966
Neo-Futurism

1970
Metabolism

1974
Landscape Urbanism

2009
Ecological Urbanism

SMART CITY

1893
City Beautiful

1902
Garden City

1914
Futurism

1917
CIAM

1924
Villa Radieuse

1928
Art Deco

1932
Broadacre City

1935
Futurism

1949
Neo-Futurism

1950
Modulor

1960
Chandigarh

1962
IMAG

1963
Futurism

1966
Neo-Futurism

1970
Metabolism

1974
Landscape Urbanism

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SMART CITY

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Metabolism

1974
Landscape Urbanism

2009
Ecological Urbanism

SMART CITY
Chandigarh is the first planned modern city in India as a symbol of nation’s faith in the future designed by Le Corbusier in 1951 in the East Punjab. Through investigation it became apparent that Le Corbusier proposed design principles for Chandigarh that were already theorized for Bogota in Colombia and Marseille in France following his concept of Radiant village that was never built. His design for Chandigarh was more of a prototype model, which failed to capture the spirit of Indian culture and community making it harder to navigate and familiarize with the city. If architecture is a reflection of society and culture then, is Chandigarh a successful project or a failed experiment?

Evidence can be seen in Sector 1, the head of the city with administrative buildings stretched out on a vast barren plain following the modular system. It is more like a play of massive sculptural buildings with open isolated voids in the front designed in harmony with human proportional system yet hard for a human to connect to. This thesis is about proposing a new plan for Sector 1 as the head of the city, which is connected to human body by facing the city in opposition to what Le Corbusier proposed in the administrative area that turns its back towards people in this city. This thesis is more about revisiting and redefining the administrative area of Chandigarh that is more responsive to people. The design intent relies on the works of Balkrishna Doshi and Charles Correa who defined Indian architecture with the modern paradigm.
"ARCHITECTURE is the art above all others which achieves a state of platonically grandeur, mathematical order, speculation, the perception of harmony which lies in emotional relationships. This is the AIM of architecture."

- Le Corbusier
Indian architecture in ancient times was mostly based on Hindu temples. The Indian temple architecture was mostly based on Vastu Purusha Mandala system. It is a metaphysical plan of a building that includes the course of the heavenly bodies and supernatural forces listed in the Hindu veda scriptures. It is based on grid system such as 1X1, 3X3, 5X5, etc. The most common grid structure used are 8X8 and 9X9. It is the most common one among Indian temple architecture. It can also be regarded as it is based on fractal system since it is a division of squares at certain intervals. The middle portion of the square is regarded as Brah-mastan (Space) or in other words, it can be anything or everything at the same time. The concept comes from the Hindu religion as the God is in the middle and the cosmic universe rotates around it. Hence, in Indian architecture the middle space is reserved for courtyards or gathering spaces where everyone can come together and be social. Some of the elements used in Indian temple architecture are the use of colonnades and court yards creating spaces through rhythm and hierarchy. The same rhythm and hierarchy can be seen in the step wells of Indian architecture.
Le Corbusier, an artist, architect, urban planner was born in 1887 in Switzerland and died in 1965 in France. Throughout his years, he did several theoretical projects in terms of urban planning, one of which was the design of a city called Chandigarh in India in 1951. In his book, The City of Tomorrow and its Planning, Le Corbusier states four points that can make it a great city: “we must de-congest the centers of cities, we must increase the density of the centers of cities, we must increase the means whereby traffic can circulate, and we must increase the area of green open spaces”. These principles are followed through in all of his urban projects whether they are theoretical or built. Along with this, he always stressed on the importance of order and geometry based on certain proportional system to bring order and harmony to human life. He called non-linear paths as ‘donkey’s pathway’ which should not be used anywhere since, according to him, man cannot go in a straight path to go and wants to reach a goal. This is very interesting because I have learned from the way some of the observations in that people normally do not walk in a straight path and there is a way one can force people to walk in a specific path. This is to say because one might have noticed that animals might at times cross through the grass instead of following the straight laid out path further to walk on. At the beginning of the book, Le Corbusier starts with the comparison between a town and a city and states, “A TOWN is a tool. Towns no longer fulfil this function. They are ineffectual; they use up our bodies, they thwart our souls... the lack of order to be found everywhere in them offends us... ”. In contrast, he mentions, “A city! It is the grip of man upon nature. It is a human operation directed against nature, a human organism both for protection and for work. It is a creation. All the poetry we find in nature is but the creation of our own spirit.” It is important to understand his thought process that he was really an advocate for the industrial age and wanted the machine and humans to control everything. For instance, Le Corbusier mentioned that nature is overpowering humans and cities are great because they are otherwise. But in reality, nature will have the ultimate power more than humans. Therefore, I think it was a challenge for Le Corbusier to solve the problem where both try to co-exist and hence, he proposed to have lots of open spaces in the city in a very orderly manner. Overall, it would be a good challenge for me to figure out the way in which I envision a city to be after learning the ways in which Le Corbusier did.
Le Corbusier in his book, *Towards a New Architecture* talks about the basic principles of designing and building at building scale just like the city scale. He begins with the comparison between the engineer's aesthetics and architecture. Like Alberti, Le Corbusier heaps praises for architecture stating, “ARCHITECTURE is the art above all others which achieves a state of platonic grandeur, mathematical order, speculation, the perception of the harmony which lies in emotional relationships. This is the Aim of architecture” (110-111). Through this he gives skill of power to the architect who can change the lives of the people and make them happy.

Hence, he set certain principles that he came up with according to his beliefs and uses them as guidelines as he designs believing that is what people need and can make them really happy. One of them is the regulating lines. According to Le Corbusier, “a unity gives measure and unity; a regulating line is a basis of construction and a satisfaction” (72) meaning everything should be based on order and geometry in a building to create harmony. Along with his obsession of geometry, proportions, and harmony, Le Corbusier was an advocate of standardization. This is say because he includes, “we must aim at the fixing of standards in order to face the problem of perfection...Architecture operates in accordance with standards. Standards are a matter of logic, analysis and minute study: they are based on a problem which has been well stated” (131). This became one of the principles during the modern movement where in order to build according to the industrial age and mass produce things, lots of standards were made. Even to the present time, mostly everything works with basic standards especially at the building scale since, there are still some areas of exploration, individually and creativity at furniture scale and city scale. Personally, it feels like the rise of the visible beauty, quality, and standardization has been the downfall of architecture. Le Corbusier notes, “the Plan proceeds from within without, the exterior is the result of an interior. The elements of architecture are light and shade, walls and space” (177) referring to the open floor plan and incorporating nature into the building so that it can blur the boundary between the interior to exterior. In this manner, clear thought process behind the evolution of ideas of modernism can be seen and understood through Le Corbusier’s writings even though it could be argued whether one likes it or hates it.
Louis Kahn born on 1901 in Estonia and died in 1974 in New York was an architect. He was one of the key architects of the 20th century. His philosophy in architecture is similar to the Japanese architects who look at the importance of light and shadow while trying to incorporate it in their works as a key element. Louis Kahn does the same thing in every project with his monumental and monumental architectural style. His project of designing an Indian Institute of Management in Ahmedabad was a very influential project which influenced several people in India and across the globe. Like Le Corbusier, Kahn was heavily influenced by Greek architecture as he said, “Greek architecture taught me that the column is where the light is not, and the space between is where the light is. It is a matter of no-light, light, no-light, light” (Schielke). Through this it is evident that Kahn is intending to say how light and shadow can bring spirit to the space and how articulately it needs to be carefully planned as it is going to occupy the space. Moreover, Schielke mentions Louis Kahn stating, “a plan of a building should be read like a harmony of spaces in light. Even a space intended to be dark should have just enough light from some mysterious opening in order to be able to see it in quite command of the scene. It is also consistent in its work and that is filtering through all the side, climatic conditions, but works with help in sculptural forms to modernize.

Figure 1.23: Exterior

Figure 1.24: Interior stair at MIT
Figure 1.25 (to the left): Interior stair at MIT

Figure 1.26: Play of light and shadow
Figure 1.27: Arches replicated in facade

Figure 1.28: Looking at the courtyard
Chandigarh Urban Lab is a studio owned by Vikram Aditya Prakash, son of Aditya Prakash who worked with Le Corbusier on the Chandigarh project. Vikram Aditya Prakash was born and grew up in Chandigarh before going to architecture school in USA. He has been currently teaching at the University of Washington and running his studio in India and practicing in USA. This was one of the several projects done by him and his team in Chandigarh.

The design process of the proposed plan for the Rajendra park is shown at the bottom. It is interesting to note how they are trying to connect it to the Indian pattern and somehow trying to relate it back to India and the site. Incorporation of the Chinese philosophy of "Kai-he" meaning Open-Close may make sense due to the program and activities. But it seems like the language gets lost in the translation and the final product seems completely random and unrelated to the site and purpose. Hence, it would be a challenge to propose a plan for the park which takes into consideration the edge conditions along with the past design and ways to make it better.
An International Competition was held by the Chandigarh government about the empty site in Sector 1, which was originally proposed by Le Corbusier to build a Governor’s palace. But the government did not have money at that point and did not want a palace in that place but liked the design and decided to call it Museum of Knowledge. Now, the government has the money and wants to realize the project.

The presented project on the left was the winner of the Competition. Hence, analyzing the project based on the concept and its worthiness of being in Sector 1.

The concept of this project was based on the domino system laid out by Le Corbusier. For instance, the columns in the domino system are replaced by tubes and are rotated to form a central space. This project succeeded in a way that it has kept the spirit of Le Corbusier alive but is that really needed in here or Chandigarh needs something that represents India more than Le Corbusier? Hence, it would be interesting to note whether the Chandigarh government decides to build this realizes Le Corbusier’s dream by building the project that he himself designed.
Balkrishna Doshi born in 1927 in Pune, India is an educator, architect, and urbanist. He started his education in J.J. College of Architecture in India before going to work under Le Corbusier in Paris. He opened his studio called Vasu-Shilpa in 1955 after returning to India. He has closely worked with Louis Kahn during the construction of Indian Institute of Management (IIM) in Ahmedabad, after five years, Doshi got the opportunity to design third branch of IIM in Bangalore.

Practicing during the 1960s and working under Le Corbusier for few years, Doshi was heavily influenced by the modern movement in architecture. With the works of Le Corbusier and Louis Kahn in India during 1950s to 1960s and with the aspirations of Indians to keep up with the rest of the world, Doshi very articulately designed trying to bridge the gap between modernism and ancient Indian principles. As Curtis explains: “Doshi’s quest for an authentic architecture blending old and new regional and universal, has relevance beyond India. In many other areas of the Third World, architects are grappling with the problem of how best to modernise yet maintain a core of cultural identity.”

Doshi tries to connect the modern with the traditional with the help of materials and key principles of modern and traditional Indian architecture; his design bases are based on climate conditions making it sustainable and easily fits into the context of the site. In terms of materials, he used concrete as a main material just like any other modern architect; but at the same time, he introduced stone and rough blocks of grey granite which was local to the place. He used the granite for walls combined with trellis to create a new vocabulary.

Figure 1.35: Site plan of IIM Bangalore

Figure 1.36: Walkway through the academics building

Figure 1.37: (to the left) Play of light and shadow

Figure 1.38: Interior with skylight

Figure 1.39: Exterior courtyard space in the dormitories
The project is divided into two main buildings such as the academics buildings and the dormitories. The academics building include classrooms and faculty rooms whereas the dormitories serves a place of living for the students on campus. Doshi plays with spaces in terms of interior and exterior while adding spirit with the texture of light and shadows. The spaces are surrounded by intertwining courtyards, linearly arranged in the academics building and through walkways and verandahs in the dormitories respectively.

The major influences for the project come from regional and global scales. For instance, the idea of parasols in IIM walkways came from Le Corbusier’s design of Shodhan House in Ahmedabad. Furthermore, his connection detail of stone and concrete came from Joseph Stein as Doshi was struggling to come up with one. In general, Doshi also used neo-classical colonnade from the Greeks as vertical piers in IIM. In terms of regional, Doshi’s influences come from the floor plans of the Indian temples in the South. Some of the references can be seen in the floor plan of the Meenakshi temple and Srirangam temple especially, with the maze-like spaces which became a principle element in Doshi’s design connecting different spaces with different programs. Courtyard spaces have been a key feature in Indian architecture over the years whether it is used in residential, commercial or institutional projects. It is much appreciated and celebrated spaces in a building encouraging collaborations and group activities. In this manner, with the use of traditional and global elements, Doshi was able to achieve a design which was analogous to an Indian city filled with streets, galleries, courtyards, balconies and so on. According to Doshi, "this campus is a flowing river..." which is ordered through a rigorous grid system yet feels fluid with the in-fill spaces filled with courtyards and green spaces.
Charles Correa was an architect, urban planner, educator, and activist. He was born in 1930 in Hyderabad and died in 2015 in Mumbai. Correa studied at St. Xavier’s College in Bombay, followed by the University of Michigan and Massachusetts Institute of Technology, where he taught for a few years. In 1958, he opened his own practice in Mumbai. Like Balkrishna Doshi, Charles Correa was heavily influenced by modernist masters such as Le Corbusier, Louis Kahn, and so on. Correa similar to Doshi tried to combine modernist principles with traditional architecture. For instance, he was highly impressed by Le Corbusier’s use of concrete to create forms and tried to incorporate that in his buildings but only as long as it pertains to the site. One of the most interesting things about Charles Correa was his constant approach towards the site in all of his projects. For example, in this project of Jawahar Kala Kendra, a cultural center in the memory of the First Prime Minister of India, Pandit Jawaharlal Nehru, he used the local language of architecture near the site and tried to evoke similar feelings being in this space as being in the city of Jaipur. Along with that he also paid close attention to the climatic conditions and mostly used traditional materials in his design rather than some particular ones like the modernists did. As can be seen in this project, he uses the red stone that Jaipur is known for, it is called the Pink City because of its material. Hence, Correa adapted that material and used in the building instead of using concrete and trying to make a statement. On a similar note, it was really interesting to note that Charles Correa also tried in his buildings to not do a modernist building and his projects will follow the concept of “open to sky,” which is evident in all of his work. In urban planning, he would try to stay away from designing high-rise buildings and instead built low-cost mid-rise apartment buildings to better connect to human scale. He also created common spaces within the building for the people to get together and created a sense of community within his projects. This project is a good example of how he articulately creates an exterior courtyard within the building for the people to get together.
His design for Jawahar Kala Kendra was mostly based on the Vedic mandala system and the city planning of Jaipur. The plan of Jaipur was based on nine square grid representing nine planets in the ancient Vedic mandala, but the design changed due to the mountains on the site. Correa started with nine square grid but rotated one of the squares to represent the city plan of Jaipur. His very cleverly created an entrance space from the rotation of the square. He took one step further than Jai Singh II, the planner of Jaipur and assigned each square its function based on the location of the planet. For instance, he places theater in the square of Venus since, Venus represents arts in the Vedic system. He also gets the symbols carved on the walls of the square in order for the people with some knowledge of the Vedic system to understand.
The Hyderabad International Convention Center is the largest convention center in India, opened in 2006. It is designed for 50 to 7,000 attendees covering 27,000 sq.m. spreading over 15 acres. One of the key spaces in this convention center is the Central Hall highlighted in orange in the ground floor plan to the right, which is 6,480 sq.m. It is a pillar-free hall with the height of 15m, including a 300 seats, which can be further divided into six different smaller halls with the help of moveable walls.

Looking at the floor plans of the convention center, it seems like a very simple plan. It looks more like a standard design layout for convention centers. Especially while looking at the form of the Convention center, it is evident that the architect never really invested any time trying to come up with a form that represents India and fits to be in that specific country, city or site instead of implementing a very generic modern form to the building. Hence, it would be a challenge to incorporate traditional Indian principles trying to consider the spirit of time and design the Convention center representing India.
Chandigarh is the city located in the northern part of India as a capital of two states such as Punjab and Haryana. It has a total area of 114 sq.km, which is around 44.02 sq.mi. It is called 'City Beautiful' in India due to ample green spaces in the city. Some of the biggest tourist attractions in the city of Chandigarh are the gardens and parks. For instance, one of the most visited gardens is the Rock Garden, which features the works of Nek Chand. Nek Chand started to build sculptures from recyclable materials at the foothills of the Shivalik hills near Sukhna lake. His sculptures represent the culture and everyday life of Indian society. Hence, it is highly famous and second most often visited place in India after Taj Mahal. In this manner, even though the city includes the great works of Le Corbusier, Nek Chand is widely known and loved by everyone in the city.

**Figure 2.1: Area of Chandigarh**

**Figure 2.2: Entrance to the city of Chandigarh**

**Figure 2.3: Nek Chand’s Rock garden**

**Figure 2.4: Plaza in Sector 17**
HIMALAYAS
Resulted from the collision of tectonic plates between India and Tibet.

SHIVALIK HILLS
Formed from the alluvial deposits through the erosion of the Himalayas mixed with sand, clay, and rocks.

ALLUVIAN PLAINS
Created from the erosion of the hills forming land rich for agriculture.

KAIMBWALA
A historic agricultural town benefiting from the rich deposits on the soil.

SUKHNA LAKE
A man-made reservoir to store the runoff from Kaimbwala, rich in vegetation and wildlife.
Le Corbusier and his team set certain limitations within the 5 miles radius from the edge of the city of Chandigarh. This zone was later called the “Periphery,” consisting mostly agrarian landscapes of villages and farmlands with some forested areas. Some strict restrictions regarding the future development, height, and density were placed on the Periphery, which came to be called the Periphery Control Act of 1952. Later, the area was extended to 10 miles radius in 1962.

It is interesting to note that the act is in complete opposition to the growth patterns and future prediction on the growth around the city. Hence, the challenge would come in the way of the Chandigarh government whether to follow the Periphery Act or give in to the growth.
Figure 2.23: Unauthorized colonies

1- Kalyan Colony
2- Kumhar Colony
3- Shahpur Colony
4- Rajiv Colony
5- Guru Sagar Colony
6- L.B.S. Colony
7- Nehru Colony
8- Pandit Colony
9- Kuldip Colony
10- Mazdoor Colony
11- Colony No. 5
12- Ambedkar Colony
13- Kabari Colony
14- Sanjay Colony
15- Colony No. 4
16- S.B.S. Colony
17- Madrasi Colony

Figure 2.24: Density of Chandigarh (people/acre)

- 0-25
- 26-50
- 51-100
- 101-150

Figure 2.25: Perspective Plan of Chandigarh 2031
Using Spatial Syntax analysis, the roads of the city of Chandigarh are analyzed based on its integration and connectivity. For instance, in the axial map of Chandigarh, one can see that V1 and V2 are highly integrated and connected to the other roads and streets supporting the hierarchy of the roads laid by Le Corbusier. Moreover, the streets become less integrated as they are farther from the main roads creating a tree-like structure leading to less integration. In terms of vehicular patterns and traffic, it makes sense for the V1 and V2 to be most integrated as people would normally use these routes to move from one place to another rather than walk on it. In terms of Sector 1, it should be noted that there is less integration leading to opportunities in designing the area in such a manner that it connects the Kansal village at the top and hence, adding more integration to the space.
Particular interest lies in the design and planning of Sector 1 since, that is the Sector specifically designed by Le Corbusier in 1950s. He took upon the task of designing an administrative area in Sector 1, which can be regarded as the head of the city. He included three key administrative buildings as can be seen in the images below. But interestingly, he designed these buildings using human proportional system yet humans failed to connect to such a massive scale. At the same time, in order to maintain the sacredness of the buildings, Le Corbusier left the area in front of the buildings completely barren. This indeed created a deserted place where people do not occupy the space. Moreover, he designed monstrous sculptural modernist buildings in India, in complete opposition to its very rich and vibrant culture. Hence, the interest in exploring the possible programs that can fill the head of the city and enrich the environment by attracting more people in the space is heightened. Therefore, the site was selected with a passion in exploring the site at district and building scaled due to its historical legacy and current barren conditions.
Administrative area
Rajendra Park
Villages
Landbanking/Unused land
Agricultural land
Residential houses in the City

Figure 2.35: Land use map

Figure 2.36: Green cover near the site
Figure 2.37: Figure-ground

Figure 2.38: Road map

2km (1.24mi) = 0.77mi² = 495 acres
The question is how to work with edge conditions especially when one is dealing with one between a city and a village. For instance, the section through the border between Kansal and Sector 1 shows the use of “ha-ha” wall so that physically there is a barrier but views are blocked.

Figure 2.39 (to the left): Diagram of site conditions
Figure 2.40: Map noting the edge conditions between Kansal and Sector 1 and Nayagaon and Sector 1

ADMINISTRATIVE AREA
RAJENDRA PARK
NAYAGAON
Le Corbusier is believed to have worked with 600 m and 400 m squares while designing the Capitol Complex. At the same time, he is believed to have just gone on site and sketched the placement of the building based on the location and how it looked as a skyline with Shivalik hills and the Himalayas as the background. Le Corbusier is said to have called it, "THE QUESTION OF OPTICS." This can lead one to conclude the ongoing debate whether Le Corbusier used Modulor system to lay the buildings on the ground of Sector 1 or not.

**Future vision:**
- To install Le Corbusier’s design intent of Sector 1 and make it the head of the city which is responsive to the people
- To propose a better solution to the edge condition between the urban and rural environment

**Future building:**
- To design one of the buildings from the masterplan of the Sector at least to the detail of its form and function
- To propose a new design that translates the term ‘Modernism’ into Indian context
WHAT KIND OF PROGRAM IS NEEDED?

The key to deciding on the program is what does the city of Chandigarh need while taking into consideration of what they already have. For instance, according to the diagram about the key places to visit in Chandigarh, it is clear that Chandigarh already has lots of parks. Hence, proposing a new park instead of Rajendra park did not make sense. Additionally, there are also several key museums around Sector 1 which people normally do not visit. This implies that Chandigarh might not need another museum in Sector 1 as the government is planning on doing.

The program for the project is to have a government building for the City of Chandigarh as mostly all the administrative buildings in Sector 1 are used for the state affairs. Also, design a Sports Complex including a cricket, football, tennis, badminton, hockey stadium for the people. Along with sports complex, it is also important to include a program that can attract people in the space and have 24x7 use of it. Therefore, government housing for people working in the administrative area and elsewhere along with student housing that is supported by the students going to University in Sector 12. In this manner, there will always be people in the Sector instead of it being dead after office hours or at night.

On a building scale, design a mixed use building including a Convention center serving the business people and Community gathering space serving the common people. It would be more like a Cultural center with programs such as music workshop, dance workshop, library, art gallery, lecture hall, interior theater, exhibition hall, ballroom, etc. This type of program will help community engagement with business people who can have conferences at the center.

Create public spaces connecting the existing and proposed buildings while stitching the surrounding edges between a village and a city. These public spaces can include forest trails, market spaces, orchards and agricultural lands. In this way, the public spaces will encourage people engagement throughout the day making it safer and more active.
SPORTS COMPLEX

Figure 2.48: Cricket ground

Figure 2.49: Soccer ground

Figure 2.50: Hockey ground

Figure 2.51: Badminton court

Figure 2.52: Tennis court
Le Corbusier Vision
- Rajendra Park to the left
- Some key administrative buildings on the right including Secretariat, Assembly, and High Court for both the state governments
- Open Hand Monument as a symbol of Chandigarh in Sector 1

Existing Condition
- Helipad with mango orchards and Sports Club building on the left
- Secretariat, Assembly, and High Court for both the state governments
- Government included Reserve Bank of India and Bar Complex for the people of Chandigarh in Sector 1
- Open Hand Monument still the symbol of Chandigarh

Iteration 1
- Existing Le Corbusier building in red
- Densifying the Sector with more program in accordance to the existing building
- Trying to bridge the gap between two zones in the Sector such as Rajendra park and administrative area

Iteration 2
- Existing Le Corbusier building in red
- Densifying the Sector with more program in accordance to the existing building
- Differentiating the zones in Sector 1 while connecting with the market at the top

Iteration 3
- Existing Le Corbusier building in red
- Densifying the Sector with more program in accordance to the existing building
- Trying to bridge the gap between two zones in the Sector such as Rajendra park and administrative area

Figure 3.1: Le Corbusier’s Vision
Figure 3.2: Existing Conditions
Figure 3.3: Iteration 1
Figure 3.4: Iteration 2
Figure 3.5: Iteration 3
FIGURE 3.6: Existing Road System

Figure 3.7: Iteration 1
- Trying to bring order to the chaotic grid in the Sector
- Extending the grid from the surroundings in order to connect the angular grid at the top with the perpendicular grid at the bottom and vice versa

Figure 3.8: Iteration 2
- Trying to bring order to the chaotic grid in the Sector
- Specifying three major connections with the surroundings while creating a grid pattern from those angles

Figure 3.9: Iteration 3
- Trying to bring order to the chaotic grid in the Sector
- Using a fractal system and subdividing the Sector led to a perpendicular grid pattern which can be connected to the entire city
- Increasing and decreasing the density of the grid based on the surrounding grid patterns
Figure 3.7: Iteration 1
- Green space as a connection between two different zones like the park and the administrative area; hence, the triangle in the middle derived from the intersection of the connecting views of the Sector to its surroundings
- Other green spaces within the administrative area running between the buildings

Figure 3.8: Iteration 2
- Trying to connect the leisure valley running through the city to the top
- Other green spaces within the administrative area running between the buildings

Figure 3.9: Iteration 3
- Trying to connect the leisure valley running through the city to the top
- Green space as a connection between two different zones like the park and the administrative area
- Green space shape derived from the connecting views of the Sector to its surroundings
Iteration 1
- Placing buildings and road system based on the existing condition
- Trying to extend the leisure valley through the Sector with the major green space in the middle
- But seems random without any planning or strategy

Iteration 2
- Placing the buildings according to the existing conditions in the Sector
- Green spaces act as connections between buildings
- But the green spaces also act as a buffer and excluding the buildings instead of connecting them

Iteration 3
- Extending the angular grid at the top of the Sector and connecting it to the perpendicular one at the bottom
- Placing the buildings in its own area as a celebration to their individuality in terms of function
- Extending the leisure valley through the Sector while connecting both the zones
- But it does not seem to provide spaces for future growth

Iteration 4
- Extending perpendicular grid and further breaking it down to connect it to the human scale
- Placing the buildings according to the existing conditions and road pattern
- But the Sector seems divided and isolated in terms of program
Activities
- Encouraging people to occupy the area
- Promoting variety of group activities

Programs
- Promoting diversity with different landuse
- Encouraging public interest

Figure 3.17: Children playing in the playground
Figure 3.18: Open Market
Figure 3.19: Family having a picnic in the park
Figure 3.20: Cricket Stadium
Figure 3.21: Government Housing
**Pedestrian Paths**
- Increasing movement within the area
- Providing connections with different buildings

**Vehicular Paths**
- Connecting Kansal village directly to the city
- Giving buildings access to major roads

**Bicycle Path**

**Natural Barrier**

**Street Furniture**

**MOVEMENT**

**Productive Landscape**
- Expanding the agricultural land
- Promoting agricultural tourism
- Farmers Market

**Green Cover**
- Increasing plant diversity
- Increasing habitat diversity
- Producing organic crops

**NATURE**

**Figure 3.22**: Movement in Sector 1

**Figure 3.23**: Tertiary Road

**Figure 3.24**: Quaternary Road

**Figure 3.25**: Primary Road

**Figure 3.26**: Secondary Road

**Figure 3.27**: Nature in Sector 1

**Figure 3.28**: Agricultural Tourism

**Figure 3.29**: Farmers Market

**Figure 3.30**: Mango Orchard

**Figure 3.31**: Animal diversity
Figure 3.32: Types of Species in Sector 1

Figure 3.33: Model of Sector 1 with context

Figure 3.34: Model of Sector 1

Figure 3.35: Section of Forest trail with the use of Native trees
BRAHMA PADA
First belt including the central square field of energy; 9 cells (padas)

DEVIIKA PADA
Second concentric belt; 16 cells (padas)

MAANUSHA PADA
Third concentric belt; 24 cells (padas)

PASACHIIKA PADA
Fourth concentric belt; 32 cells (padas)

CONCEPT

Figure 3.36: Vastu Purusha Mandala 9x9 grid
Courtyard

It is one of the most important characteristics of Indian architecture. Generally, it is in the center of the building open to sky for climatic as well as religious reasons. In terms of religion, it traces back to the empty space (Brahman) in middle of Vastu Purusha Mandala and hence, it is mostly placed in the middle of the building.

Colonnade

Mostly surrounded by open courtyard spaces. It acts as a buffer between open and closed spaces. It adds to the characteristics like rhythm and repetition that is present in most Indian architecture.

Shikhara

It also means ‘mountain’ in Sanskrit. It is mostly present in India architecture as highly ornamented and elaborate roof structure. It adds character to architecture which is lacking now-a-days. It can act as light wells bringing light into the interior spaces which would be more like a modern version of the ancient roof structure.

Courtyard

Figure 3.49: Section of corbel arch with brick as a material

Figure 3.50: Indian temple with Shikhara

Figure 3.51: Plan and perspective of towers based on fractal system of 1/3rd rule creating hierarchy
Chandigarh in Historical Context

Urban Planning

Introduction

Chandigarh is the first planned city in India as a symbol of nation’s faith in the future designed by Le Corbusier in 1950s. He selected the site for the capital for the union of Punjab, Haryana and Himachal Pradesh. The city is situated at three kilometers from the border of Pakistan. For this reason, it was declared as the capital of Punjab. The city was founded to act as a capital for two states after being independent in 1947. Now, it is also the capital of Punjab and Haryana in India.

During the separation between India and Pakistan, the capital of Punjab, Lahore went to Pakistan. In need for a new capital for East Punjab, Mr. Jawaharlal Nehru commissioned the work to Albert Mayer and Matthew Nowicki. But after the sudden death of Mayer, a Union territory and a state capital of Punjab and Haryana in India.

The project was initiated by the Collegiate Society of Architecture. Fostered by the Ministry of Planning, Government of India, this society recommended the construction of Chandigarh. The site was carefully selected near the border of India and Pakistan, and the construction was initiated by the Ministry of Planning, Government of India.

Let this be a new town, symbolic of the freedom of India, unfettered to Pakistan. In need for a new capital for East Punjab, Mr. Jawaharlal Nehru commissioned the work to Albert Mayer and Matthew Nowicki. But after the sudden death of Mayer in a plane crash, the project was given to Le Corbusier, a Swiss-French architect. His initial plan was to build a city on the site, but after the death of Mayer, the project was given to Le Corbusier.

The project was initiated by the Collegiate Society of Architecture. Fostered by the Ministry of Planning, Government of India, this society recommended the construction of Chandigarh. The site was carefully selected near the border of India and Pakistan, and the construction was initiated by the Ministry of Planning, Government of India.

Le Corbusier planned the city as a prototype model rather than a site-specific design. He believed that the city should be a symbol of the future and should represent the principles of modern architecture. Le Corbusier’s design for Chandigarh was based on the idea of a ‘White City’, which was a modernist concept of a city that was free from historical influences.

Le Corbusier’s plan for Chandigarh was based on his理念 of the ‘Modulor’, a human-scale system of proportions that he believed should be used in the design of buildings and urban spaces. His plan for Chandigarh was based on this system, and he believed that the city should be designed in harmony with human proportions.

As an extension of his plan for Chandigarh, Le Corbusier also included the area of parkland providing sites, schools and community facilities. For instance, he initiated the system of traffic separation called Les Sept Voies (the 7V’s) in Chandigarh. He used the principles of CIAM, a group of modernist architects who believed in the use of modern technology and materials in architecture.

Let this be a new town, symbolic of the freedom of India, unfettered to Pakistan. In need for a new capital for East Punjab, Mr. Jawaharlal Nehru commissioned the work to Albert Mayer and Matthew Nowicki. But after the sudden death of Mayer in a plane crash, the project was given to Le Corbusier, a Swiss-French architect.
URBAN SCALE

Strategies

- Promoting diversity with different landuse programs
- Promoting variety of group activities
- Encouraging people to occupy the area

Activities

- Giving buildings access to major roads
- Connecting Kansal village directly to the city

Vehicular Paths

- Providing connections with different buildings
- Increasing movement within the area

Pedestrian Paths

- Increasing habitat diversity for animals
- Producing organic crops
- Preserving existing trees
- Increasing plant diversity

Green Cover

- Farmers Market
- Promoting agricultural tourism
- Expanding the agricultural land

Productive Landscape

BUILDING SCALE

Elements in Architecture

- amandala in middle of Vastupurushamandala (Brahman)

Concept

- Traces back to the sky for climatic as well as functional aspects of the building open to atmosphere

Indian architecture

- Generally, in the center of square grid as proportional system

Site Ideal courtyard spaces in the building displaying hierarchy

Section of corbel arch with brick as a material

Plan and perspective of towers based on fractal system of 1/3rd rule creating hierarchy

Brick

Floor Plans

Orthographic drawings

Orthographic drawings looking South West

Orthographic drawings looking East

Orthographic drawings looking South

Orthographic drawings looking North

Orthographic drawings looking Southwest

Orthographic drawings looking Southeast

Orthographic drawings looking Northwest

Orthographic drawings looking Northeast
### Elements in Architecture

**Exhibition Lobby**

- **Building Scale**: 118 ft 119 in

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**HONORS PRESENTATION**

**History**

- **Research**
  - Architecture with modern paradigm.
  - More responsive to the people.
  - Administrative area of Chandigarh that is back towards the people in what Le Corbusier proposed in facing the city in opposition to which is connected to its body.

**This thesis is the Modular system.**

- **Administrative buildings stretched Sector 1, the head of the city with**
  - Ment? Evidences can be seen in successful project or a failed experi-
  - gation and familiarize with the city. If culture the spirit of Indian culture and
  - nature then, is Chandigarh a prototype model, which failed to cap-
  - ture? Le Corbusier’s design for Chandigarh was more of a pro-
  - parent that Le Corbusier’s design

- **Le Corbusier’s Vision**

- **Existing Conditions**

- **Le Corbusier’s plan**

- **Mayer’s plan**

- **Proposed Program**

- **Haryana**

- **Pradesh**

- **NAYAGAON PARK**

- **Leisure Valley**

- **Nayagaon village**

- **CRICKET STADIUM**

- **GOVERNMENT HOUSING**

- **HEALTH CENTER**

- **HOCKEY GROUND**

- **MARKET**

- **HIGH COURT**

- **ASSEMBLY**

- **INTERIOR SPORTS COMPLEX**

- **RESERVE BANK**

- **BAR COMPLEX**

- **STUDENT HOUSING**

- **CONCEPT**

- **Programs**

- **- Encouraging public engagement**
  - **- Promoting variety of group activities**
  - **- Encouraging people to occupy the area**

- **- Giving buildings access to major roads**

- **- Producing organic crops**

- **- Preserving existing trees**

- **- Increasing plant diversity**

- **- Farmers Market**

- **- Promoting agricultural tourism**

- **- Expanding the agricultural land**

---

**Design Hypothesis**

**- Connection of the site with the surroundings**

- **Vastu Purusha Mandala**

- **- Amandala (Brahman) in middle of Vastu Purusha Mandala**

- **- Traces back to the empty space**

- **- Religious reasons**

- **- Generally, in the center of the build-**

- **- Act as a buffer between open and**

- **- Closed spaces**

- **- Acts as a buffer between open and**

- **- Yard spaces**

- **- Corbels**

- **- Mostly present in Indian architec-**

- **- Adds to the characteristics like**

- **- Adds character to architecture**

- **- Rotted roof structure**

- **- In most Indian architecture**

- **- Shikhara in most Indian architecture**

- **- Closed spaces**

- **- Acts as a buffer between open and**

- **- Yard spaces**

---

**[Re]Defining Chandigarh**

**Elevation looking Southeast**

**Elevation looking Northeast**

**Plan**

**- yahoo**

**- Produce**

**- Orientation**

**- Produce for**

---

**[Re]Defining Chandigarh**

**- Yahoo**

**- Produce**

**- Orientation**

**- Produce for**

---

**[Re]Defining Chandigarh**

**- Yahoo**

**- Produce**

**- Orientation**

**- Produce for**
Good:
Through thorough research, I was able to understand the existence of Chandigarh and the history behind its evolution. The research helped me understand the decisions Le Corbusier and other architects made during the period of time while dealing with lots of pressure politically, socially and culturally. It made me understand their viewpoint and thought process behind their work. I was able to comprehend and document the research in concise manner to further help me with the design of Sector 1 and the building. I was able to get a good start at the planning of Sector 1 due to the research since I knew the problem and now had to find a solution to that.

Bad:
After research, I do not think I was able to apply the knowledge and come to a better solution for the project. I was not able to go further in depth for the building. I was trying to implement the urban scale solution to the thesis. I had a vision and wanted to come up with a style that can define ‘Modernism’ in Indian context. But in the process, I seems like I was directly applying the ideas instead of abstracting it. I do not think I was able to get away from the implementation of the idea. In terms of design, I lacked in many ways and was not able to defend my case against Le Corbusier’s architecture.

Conclusion:
Overall, it was great in terms of the research of the project but lacked in the translation of the term ‘Modernism’ in Indian context and the ancient Indian architecture into the modern times. Building upon the strengths, I can research and analyze the entire city of Chandigarh in terms of its existence, evolution, and propose a future solution to it in that manner. Sector 1 would just be a first step in the documentation and the study of Chandigarh under the global as well as regional and cultural context.
LIST OF REFERENCES


