Garbage Dump Expertise: Tracing the 'common man' Project in the works of Aditya Prakash

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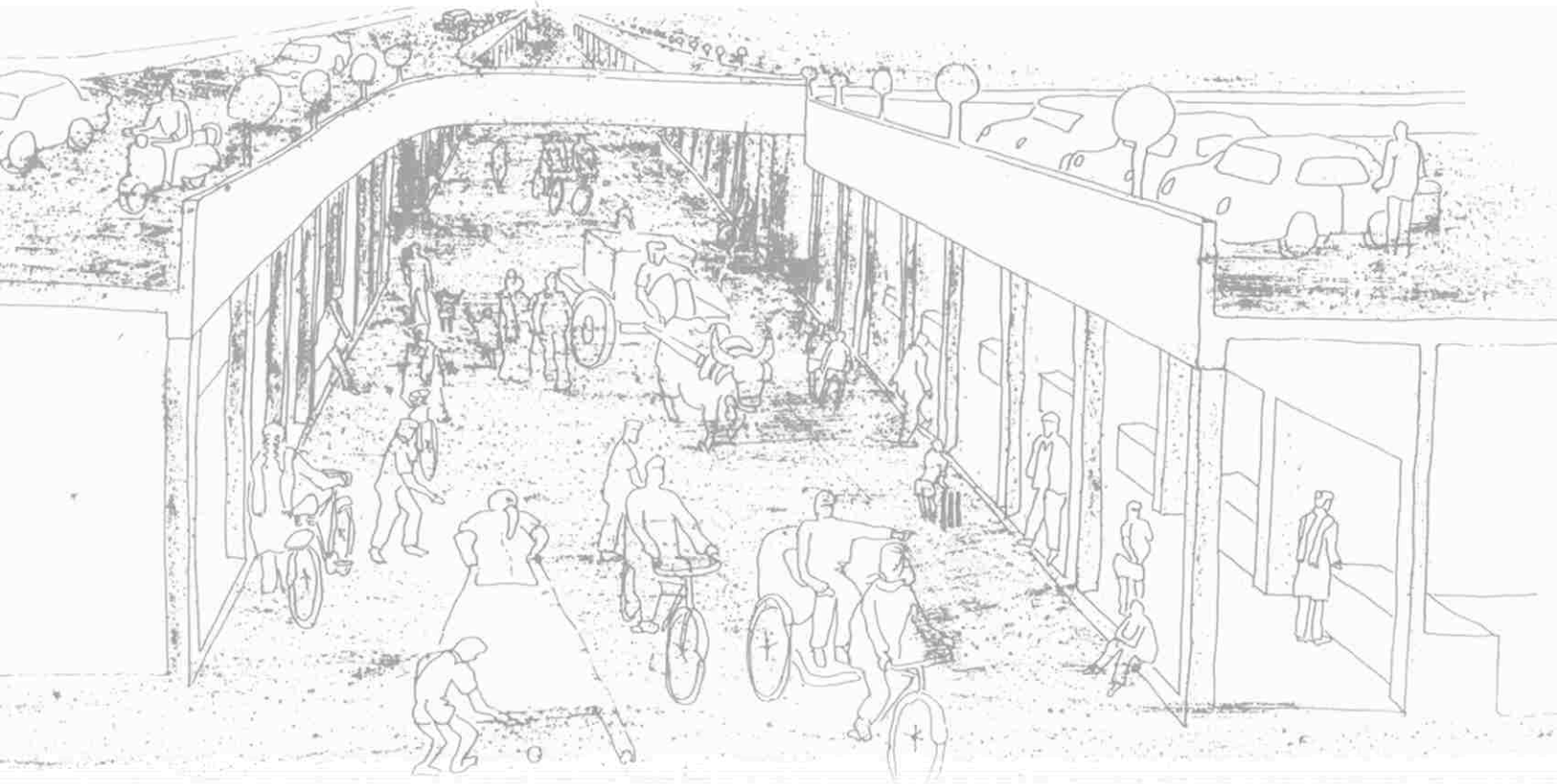
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Dr. Vikramāditya Prakash

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GARBAGE DUMP EXPERTISE

TRACING THE 'COMMON MAN' PROJECT IN THE WORKS OF
ADITYA PRAKASH

This thesis is dedicated to my Father, to my love-hate relationship with architecture and

to an unhealthy affinity for all things poetic.

University of Washington

Abstract

Garbage Dump Expertise: Tracing the 'common man' project in the works of Aditya Prakash

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This written work examines the relationship of "the common man" or the citizen, to the city though a historical account of the work of Aditya Prakash - an Indian modernist, who was part of the Capital Project Team -lead by Le Corbusier who designed the city of Chandigarh. The work of Aditya Prakash shows a commitment towards building for the citizen of India and in doing so reveals, responds to and embodies the paradoxes that constitute life in an Indian city. It traces the ways in which Aditya responds to the question of "the common man" through the course of his career as a strict modernist, a quest that culminates in the sustainable urbanism concepts he championed in the late 70s. In mapping this trajectory, the thesis seeks to reflect on the idiom of responsible architectural practice, the notion of architectural expertise and how best to design for a contested city. Immediately after Independence in 1947, Nehruvian India was in an aggressive 'build' mode, the same as it is today in the age of neo-liberalism. It is in this context that a reading of the works of Aditya Prakash is significant as it asks questions about the relationships and the future of the urban poor and the city in the face of rapid unmanaged change.

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Growing up in the heart of New Delhi in the 1990s owing to my father's Government job, living amidst the architecture commissioned by the Nehruvian vision post-independence, I had internalized the cynicism aimed towards this built environment around me. And yet, in other newer parts of the city where my family members logically progressed to build their homes, I could never feel at home.

While in architecture school, this contradiction, much less defined and perpetually lost in a myriad of opinions on what 'good' urbanism must mean, did not strike to me as my central interest. At that time. the other more 'current' parts of the city held sway, and from that position of 'outside-ness' the architecture around home was quickly judged as exclusive, neutral, utopian; as being discontinuous with the history and the larger city – the 'real' city. These newer parts of the city that were current and entertained immediately. The pace was 'real' as opposed to the one of the static Nehruvian cultural Hub. Here the same plays were enacted over the years, exhibits lay abandoned by this 'real' city that was preferred viewing this place as a transit hub.

Despite this conviction, I found myself relating to and repeating these abandoned architectural gestures in my own architectural path, thus becoming an 'outsider' in design studios. Instructed to view its inadequacy in catering to the larger city, I had hoped to make a case in my thesis for its complete irrelevance. But as India prepares to fully embrace the neo-liberal times of indomitable consumption, I find myself writing from a different 'outside-ness', unable to relate fully to this 'inevitable' change – to this inevitability.

Although set in the Nehruvian-Corbusian landscape of Chandigarh, In telling the story of Aditya Prakash, I have related deeply to the many moments of 'outside-ness' implicit in this task and therefore in his work, I have found a profound opportunity to learn.

Acknowledgements

I am grateful to Dr.Vikram Prakash for allowing me the opportunity to work on this project and for his vast reservoir of patience and counsel that has immensely contributed to my learning. I would like to thank Dr. Nicole Huber for her encouragement and Dr. Manish Chalana for the impromptu conversations while in India. I would like to thank my teachers from my undergraduate program, who set me up on this journey. A special thanks to Noreen Jacky and Alan Michelson at the BE library.

My time in this Master's program is dotted with many great conversations with my cohort and the kindness of my friends in Seattle, ones who saw me through the grim days – Thank you all. I would like to thank my family and friends for their virtual presence, understanding and support - Shout out to my family in Mumbai and Dallas!

I would like to thank my parents for their fierce resistance to, and eventual acceptance of some of my mildly odd pursuits. I am most thankful for their unconditional love.

BLUE PRINT OF URBANISATION

1. _Improve all – Rich and Poor_
2. _Productivity_
3. _Reduction of distance between production and consumption, Work and residence_
4. _Promote Self-employment_
5. _Management of wastes, by-products_
6. _Ensure clean environment, Pure water – No pollution_
7. _Utilization of all investment – Built spaces, Open spaces, Roads_
8. _Ensure unencumbered movement of Pedestrians, cyclists, animal/man and motorized vehicles – cars, trucks, buses_
9. _Flexibility – Constant growth_
10. _Monumentality – Good Identity_
11. _Profitability – Self sustainability_
12. _Promote open-to- sky –productive structures_
13. _Space for Itinerant Trades - Farmers market_
14. _Promote non-polluting means of transport_
15. _Recycling, Harvesting of water and wastes_
16. _Production of Nutrients simultaneously_
17. _Countryside next door_
18. _All workplaces – Factories to manage wastes_
19. _All service lines - water, drainage, elect telephone easily accessible and visible, hiding is escaping_
20. _Minimum distance between design and implementation_

\- Aditya Prakash

1
INTRODUCTION
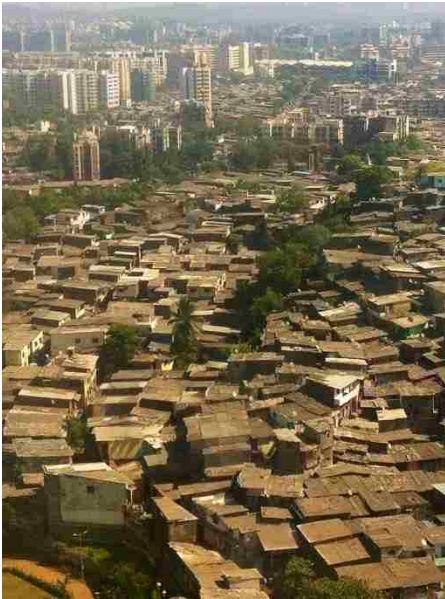
Figure 1Image of the city of Mumbai, courtesy Parthiv Shah 2013

Architectural design, in responding to Indian cities, inevitably faces a contradictory problem statement that escapes a stable and singular description. A thriving economy is challenged by rampant poverty that manifests itself in the form of squatter settlements in close proximity to other parts of the city that are aspiring towards a world class vision. Further, Ananya Roy observes[1] that '*the study of megacities in the global South has come to be dominated by two contrasting paradigms: an apocalyptic vision of a "planet of slums" and a populist vision of entrepreneurial "shadow cities"*. The process of urbanization is guided by contested meanings of progress in an Indian city where many layers of history co-exist in close dialogue with one another. Therefore, it is only obvious that growth and the changes brought forth are experienced as "fast paced" where a single moment is discernibly experienced in the past, the present and the future.

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[1] Roy, Ananya. "Slumdog cities: rethinking subaltern urbanism." *International Journal of Urban and Regional Research* 35, no. 2 (2011): 223-238.

Each one of the historic layers of the city had its own premise to exist, a vision which in turn guided their conception and dictated the form and function of the city. For example[2], the cosmological, biological, capitalist and socialist models and later, others based on cognition and perception.

Cities are markers of 'civilization' that are born out of the need to learn more about life itself[3].Although, the presence of a strong sense of purpose, *telos*, is perhaps the defining quality of an urban condition, each participant in urban activity is not automatically understood as an equal citizen. The urban poor, despite their inevitable role in serving the Indian city, are imagined to be "nuisance elements" or "the others" in our city. Moreover, not just is their participation in running the city unrecognized but they are also vilified by associating crime and disease with them.

The motto of the newly elected Government[4]; *Sabka Saath Sabka Vikas,* which means development for all, is not a novel idea. In apprising the nation building exercise undertaken by Nehru in post-colonial India, Aditya Prakash has *"Improve All – the rich and the poor"* topmost in his *Blueprint for Urbanization*. This is not to say that both visions spring from the same place, but to underscore the ubiquitous nature of a development vision that has served as a premise to build aggressively in the past as it does today, even in the face of the failure met by the Nehruvian vision.

The term 'common man' was used generously in the recent run up to the 2014 Lok Sabha election in India often self-referentially by elite defending political parties. One party

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[2] Beinart, Julian. 4.241J Theory of City Form, spring 2013. (MIT OpenCourseWare: Massachusetts Institute of Technology), http://ocw.mit.edu/courses/architecture/4-241j-theory-of-city-form-spring-2013 (Accessed 19 Nov, 2014). License: Creative Commons BY-NC-SA

[3] Evenson, Norma, and University of California, Berkeley. College of Environmental Design. *Chandigarh*. Berkeley: University of California Press, 1966.p.3.

[4] http://www.bjp.org/manifesto2014

named itself the *aam aadmi* party or the common man party. These instances demonstrate how the common man has become a vague entity furthering the invisibility of the poorest citizen. This is ascribed not just to their lack of representation but their elimination from the democratic processes. Even though the common man issue was burning as the politics and the administration of the city is the site of negotiation: and the staging of the political will, one that is often imagined to determine the fate of the poor, focusing on corruption as the cause of this disparity. The question remains that does speedy development alone necessarily mean good for the common man? Especially when there is much ambiguity about who is being referred to as the common man in the first place.

The term subaltern was coined by Antonio Gramsci and later appropriated by the subaltern studies group to refer to those groups of people who are systematically oppressed by the hegemonic social, economic and cultural structures. Gayatri Spivak further clarifies the term as she uses the term subaltern to refer to those people who are rendered voiceless by the aforementioned structures and are thus, unable to speak and fully participate in the democratic processes.

> "When you say cannot speak, it means that if speaking involves speaking and listening, this possibility of response, responsibility, does not exist in the subaltern's sphere. You bring out these so-called subalterns from the woodwork; the only way that that speech is produced is by inserting the subaltern into the circuit of hegemony, which is what should happen, as subaltern. Who the hell wants to museumize or protect subalternity? Only extremely reactionary, dubious anthropologistic museumizers. No activist wants to keep the subaltern in the space of difference. To do a thing, to work for the subaltern, means to bring it into speech. The third thing, which is the worst, that is, you don't give the subaltern voice. You work for the bloody subaltern, you work against subalternity."[5]

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[5] De Kock, Leon. "Interview with Gayatri Chakravorty Spivak: New Nation Writers Conference in South Africa." *Ariel: A Review of International English Literature* (July 1992), 23(3): 47

The common man, thus, is an issue that has to be worked through when there is any talk of a design activity in a city as the state is responsible for its entire people. But Indian cities are sites of disparity and exclusion, where those subjugated by certain structures have to find a way to participate in the same. This situation is predicted to only intensify with time with the projected increase in the urban population and inequality, as one can note by the sprawling periphery of the planned city of Chandigarh.[6] Madhu Sarin, an activist and a former Mayor of Chandigarh, writes[7]:

> Almost 60 years later, Chandigarh is rapidly moving towards becoming the center of an uncontrollable mega polis. By 2001, it already had a population of over 930,000, approximately double of what had been planned. The concept of maintaining a clear rural-urban dichotomy by preventing urban sprawl in its periphery lies more or less in tatters. The dignified life promised to its poorest citizens is another story. Rather than planned development creating inclusive space for all sections of society, the Master Plan framework has functioned as an instrument of exclusion appropriated by the elite, in accordance with changing priorities. Chandigarh today is a microcosm of the division in Indian society as a whole -- what has euphemistically been termed as the divide between India and Bharat -- the former representing the "shining" and upwardly mobile India impatient to attain "world class" standards, and the latter, the ignored, disenfranchised, almost loathed "Bharat" --- India's name in Hindi.

As identified by GC Spivak in her quote and captured by Ananya Roy as the two powerful but inadequate imaginations of Asian cities, what forms the fulcrum in accessing the subaltern is that it must not be fetishized or museumized but it must be put at the top of the development agenda.

India got its independence from colonial rule in 1947 and became a free nation championing a vision that sought to be unfettered by the traditions of the past. The Nehruvian vision was to not

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[6] Khan, Hasan-Uddin, Julian Beinart, and Charels Correa. "Le Corbusier: Chandigarh & the Modern City" Chapter Socio-Economic Change and the Poor, *Ahmedabad: Mapin* (2011). P108

[7] ibid

align with either of the two power blocks[8] - the USA and the USSR, instead it chose to borrow from both. It construed India as essentially a welfare state while it borrowed the technological worldview of industrial modernization and mechanization visibly from the west. Thus India produced many technocrats, and engineering was a dominant elite profession of that time.[9] Modernism is understood as being brought to India by foreign architects and Indian elite trained abroad, returning to India post-independence. Hence, these architects applied the principles of modernism to the nation building exercise. The euphoria of a new beginning[10] and its insistence on newness provided architects with a favorable atmosphere to showcase their 'creative' talents. As a notable writer, Mulk Raj Anand, noted in 1947, that sentimental celebration presented the danger of superficial architecture.[11]

The inflow of modernist ideas started before India formally got independent as evidenced in the town planning contributions of sociologist Sir Patrick Geddes in India.[12] Geddes believed in an empiricist stream of the modernist consciousness that was represented also by others like Frank Lloyd Wright in America and the Garden City Movement in the Britain. Le Corbusier, whose presence in India was not as gentle as the influence of the Empiricists, came to represent the Rationalists along with the Bauhaus School.[13] These seemingly opposed schools of thought have shaped the discussion on cities: what a city already is versus what it must be.

Modernism, although fundamentally stood for a good idea that broke away from tradition, it had different meaning for different agents in the postcolonial India. The Nehruvian brand pursued the desire to upgrade the traditional society into a modern one – 'step up modernism'. In Nehru's vision the common man needed to relieve himself from the shackles of the past and embrace the

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[8] Prakash, Vikramaditya. *Chandigarh's Le Corbusier: the struggle for modernity in postcolonial India*. Seattle: University of Washington Press, 2002 p.9

[9] Kusno, Abidin. "THE POST-COLONIAL UNCONSCIOUS." *The Emerging Asian City: Concomitant Urbanities and Urbanisms* (2013): p.168.

[10] Prakash, Aditya. *Chandigarh: a presentation in free verse*. Chandigarh Administration, 1978.

[11] Lang, Jon, Madhavi Desai, and Miki Desai. *Architecture and independence: the search for identity--India 1880 to 1980*. New Delhi: Oxford University Press, 1997.

[12] ibid

[13] ibid

opportunities that this new India promised to offer. For the people it held a material promise of increased production and consumption. The perspective of the architect, for Le Corbusier, modernism in India was an accommodating one – catch up with the west but preserve the primitive that could roughly translates as rural. In particular, it refers to human civilization and its relationship to the innocent (workings of) nature. The bureaucratic elite identified modernism with the lost colonial legacy.[14]

The City of Chandigarh, the first modernist city of India, came to be amidst these contested and often contradictory notions of modernism. One thing that could be said about modernism is that it views the world from a distance, for better or for worse. This distance is attributed to objectivity, to self-consciousness, to narrowly defined ideas such as being advanced, to the hedonistic spin to tradition as seen in art deco styles and to the unburdening from the weight of tradition itself. The socialist leaning of modernism believes in the inherent potential of modernism to bring social change. Yet, as seen in Chandigarh and other parts of India, like New Delhi, where many monuments were built to symbolize the nationalistic spirit embodying a socialist ethos, they did not resonate immediately with the everyday life of the people. Life flowed around them with little or no understanding of the abstract and esoteric meaning they stood for. It was believed that their stark and monotonous forms were in dissonance with what was 'the Indian way of life'. Moreover, they were spoken about in an acerbic tone that highlighted their obsolescent relationship with the lived city. Thus, the quest for an architecture that was 'more Indian' dominated the psyche of the architectural community. This gained legitimacy, as the Nehruvian state could not materialize its idealistic vision. With rampant increase in corruption and mass unemployment the vision was deemed a failure.

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[14] Prakash, Vikramaditya. *Chandigarh's Le Corbusier: the struggle for modernity in postcolonial India*. (pg3)Seattle: University of Washington Press, 2002. p5-9

Figure 2 Capital building at Chandigarh, Courtesy of Vinayak Bharne's blogpost: Beyond the Corbusian Cult: Reflections on Chandigarh Capital

Figure 3 Image of The National Museum of Natural History taken by me in the year 2008

In post-colonial India, massive investments were made at the midnight hour for a new dawn.

Nehru's idealistic vision that gave birth to Chandigarh projected abundance for one and all.
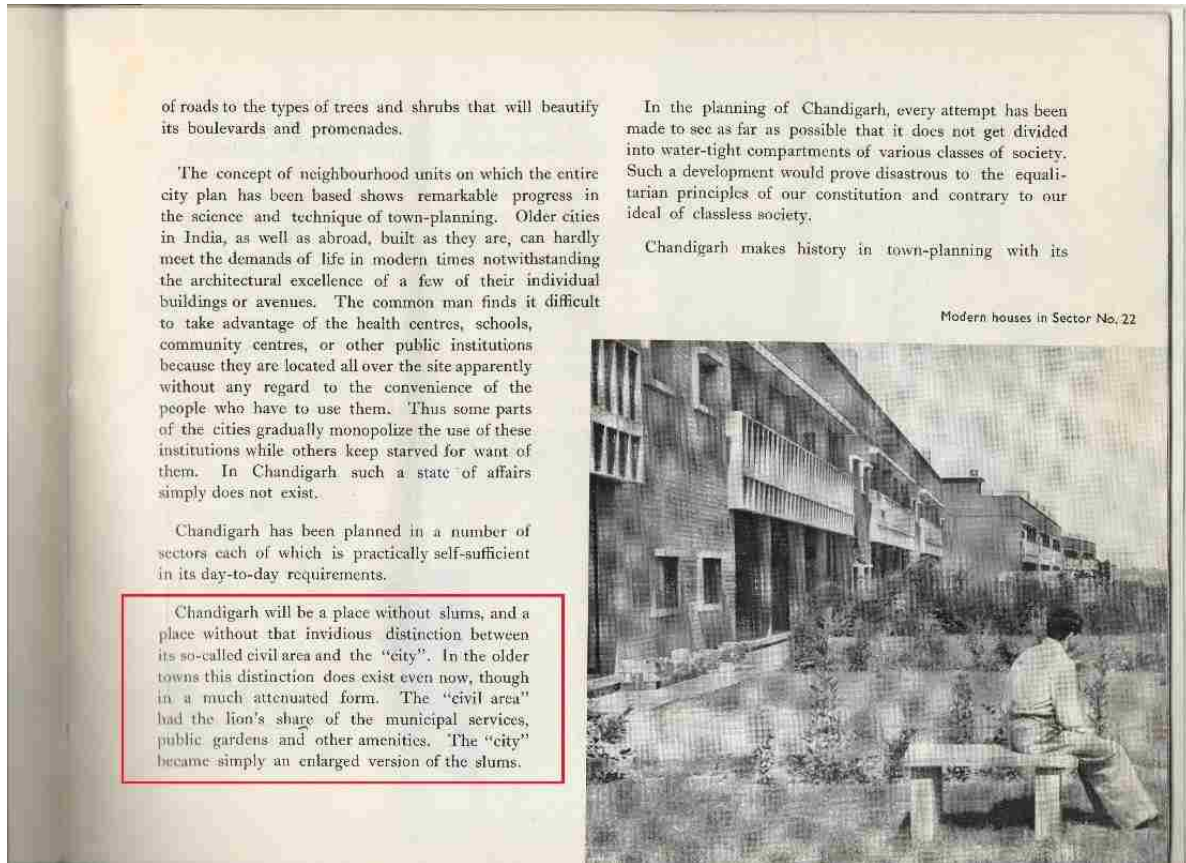

of roads to the types of trees and shrubs that will beautify its boulevards and promenades.

The concept of neighbourhood units on which the entire city plan has been based shows remarkable progress in the science and technique of town-planning. Older cities in India, as well as abroad, built as they are, can hardly meet the demands of life in modern times notwithstanding the architectural excellence of a few of their individual buildings or avenues. The common man finds it difficult to take advantage of the health centres, schools, community centres, or other public institutions because they are located all over the site apparently without any regard to the convenience of the people who have to use them. Thus some parts of the cities gradually monopolize the use of these institutions while others keep starved for want of them. In Chandigarh such a state of affairs simply does not exist.

Chandigarh has been planned in a number of sectors each of which is practically self-sufficient in its day-to-day requirements.

Chandigarh will be a place without slums, and a place without that invidious distinction between its so-called civil area and the "city". In the older towns this distinction does exist even now, though in a much attenuated form. The "civil area" had the lion's share of the municipal services, public gardens and other amenities. The "city" became simply an enlarged version of the slums.

In the planning of Chandigarh, every attempt has been made to see as far as possible that it does not get divided into water-tight compartments of various classes of society. Such a development would prove disastrous to the equalitarian principles of our constitution and contrary to our ideal of classless society.

Chandigarh makes history in town-planning with its

Modern houses in Sector No. 22

Figure 4 Image from book tilted 'Chandigarh' Published by Public Relations Department, Punjab Government [1953]

The effort to break from its colonial past however did not pan out as imagined because

decolonization was never put on stage. As Vikram Prakash argues[15] :

> "…not only architectural but also economic and institutional modernism, certainly produced a great deal of professional expertise, **but failed to stage the decolonization** of India because its elitist, top-down framing never enabled it to gain the legitimacy to represent properly, to speak for the people in whose name it was exercised. The failure here was not one of translation, as Spivak points out, but one of transfer of idiom."

Nehruvian vision was replaced slowly by the reforms and liberalization in the 1980s, which was a precursor to the globalized conditions of the Global South today. With this emerged the neoliberal worldview, where giant corporations and businesses collaborate and/or collude with the

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[15] Prakash, Vikramaditya. *Chandigarh's Le Corbusier: the struggle for modernity in postcolonial India*. Seattle: University of Washington Press, 2002. P.152

www.manaraa.com

Government and define economic processes.[16] It means these negotiations and their politics directly shape the form of cities today. Moreover, the neoliberal worldview locates the right to the city[17] in the entrepreneurial capabilities of an individual. This view threatens to flatten the reality of the hegemonic nature of society. In other words, the voiceless subaltern is called to participate in an entrepreneurial capacity, obfuscating the differences and inequalities while simultaneously rendering them responsible for their own fate. This is not very different from viewing the subaltern citizen as nuisance needing up gradation. Further, rampant commercialization, the ugly face of globalization, holds the allure of quick rewards like world class urban life for the rich and potential access to the same for the poor. The urban poor, complicit in this worldview, choose aid and benefits over tools of empowerment.[18]
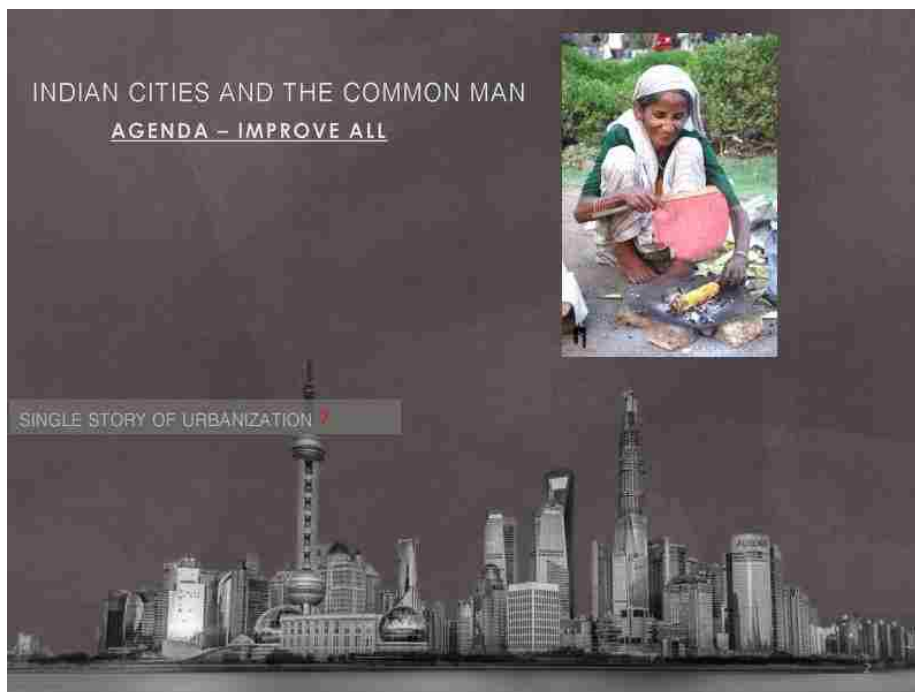

Figure 5 Image juxtaposing the 'World-class' City vision with the economic realities of the people in an Indian City.

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[16] Documentary : Delhi Work under progress
[17] Right to the city - Lefebvre
[18] Roy, Ananya. "Urban informality: toward an epistemology of planning." Journal of the American Planning Association 71, no. 2 (2005): 147-158.

This wave of newness in India in particular and the global south in general is similar to the kind that prevailed in the newly independent colonies. Today Indian cities, especially after the 2014 elections, are running towards adopting a belligerently economic model for development. Given that majority of the world's population is projected to live in the cities in future, could a purely economic model, one that shifts the responsibility of welfare from the state to market forces suffice to build a just living environment? Moreover, does a socialist vision of activism, which is to keep the interest of the poor man in mind while forging ahead, essentially has no meaning except in election speeches?

It can be argued that, while the socialist architecture of post-independent India was understood as removed from the Indian everyday life, on the flipside, it could even be viewed as one that in fact marked the everyday life of the city. By virtue of it being in the public sphere, despite conceived of abstract meaning, it came to form the backdrop against which everyday life flowed. These symbols were thus taken for granted, questioned but perhaps their influence cannot be undermined in one's own making as the citizen of India.[19] In other words, in being simultaneously present and absent from the everyday life of a city, in serving as the backdrop, in their ordering, style and materiality - the common man identifies with these buildings and the image they construct of a city. Therefore, the architecture championed by the state is necessary and paradoxically, always inadequate.

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[19] As conveyed in the preface, these Indian modernist ecosystems stand as a necessary counterpoint to the growing city. They are viewed as utopian expressions known not only for the innovative spirit that they stand for but also the essential sense of failure they carry on which the changing city rises.

Fig. 18 Publicity Department, India. Prime Minister Jawaharlal Nehru shaking hands with architect Jeet Malhotra during an official visit in Chandigarh, not dated. Fonds Pierre Jeanneret, Collection Centre Canadien d'Architecture / Canadian Centre for Architecture, Montréal © Publicity Department, India

Figure 6 Aditya Prakash at the reception of Prime Minister Jawaharlal Nehru in the year 1955

Aditya Prakash - an Indian Modernist - worked in India as an architect, educator and later on as an artist in India. He joined the team of nine architects on the Chandigarh Capital Project under the master architect Le Corbusier from 1952-1963. Chandigarh was the experiment Nehru welcomed and it still enjoys the novelty of being the first designed modernist Indian city. Therefore, in designing and being closely associated with the city of Chandigarh, his work and writings present the non-linear, observational and reflective motions of the agency of design as it addressed the newly independent India and its citizens.

The quest is set forth by the supposed interest of the Nehruvian state to build for the common man and its failure to do so even though the model he espoused tended towards a socialist model. This search to affect positively the lives of the common man through design is pronounced in the works of Aditya as he was especially committed to understanding and reconstituting the relationship of the common man to the city. In other words, he was one Indian modernist who was deeply ingrained in modernism and yet questioned it vigorously, thus gaining a deep insight into the question of architecture for the subaltern. This thesis presents a historical account of his work leading up to the common man urbanism he championed in the 1970s. His urbanism concept explored the inter-relationships among the common man, nature and urban systems with the chief intention of generating a formal response that had the interest of the common man as the main generative principle.

His view of his time at the Capital Project, architectural expertise and urbanization all intrinsically contradictory and the import of which is not visible at the first instance. This paper argues, that in understanding the contradictory impulses in all these areas, Prakash did not seek resolution through reactionary activism or flattening out of these so called opposite impulses to meet pragmatic concerns. Instead, his work stands as an example that focused on managing contradictions, persisting in the face of contradictions.

To pin Prakash's work to a framework, this thesis uses the triad of De-ruralization, Expertise and Precedents as the three important threads that form the tapestry of this work and opens it up to the present and the future. The conventional view of urbanization that puts the urban on an aspirational pedestal is being challenged with the advent of free mobility of finance capital.[20] Urban centers have been zones of trade and commerce, and zones where profits are made on production, retail and investments. With the advent of plastic money and flow of capital owing to internet revolution has 'collapsed distances', the imagination of the urban center as a solid

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[20] Prakash, Vikram, Chandigarh Urban Lab Volume ll, the Capital and its Periphery, 2014.

stronghold of all economic activities has begun to liquefy. The urban boundaries exploding and rural landscapes are continuously being transformed and assimilated. An Indian city now can be viewed more clearly as always being in a state of urban-rural influx – *a dynamic state that in today's times, due to (this) mobility of capital, is unpredictable, unmanaged and contradictory*[21]. The concept of deruralization suggests that the rural is transforming into *something else*. Given this, a responsible architectural agency must equip itself to address the liminal nature of this transformation. Moreover, architectural expertise must re-imagine itself to also mean something else. Expertise, though important, should be subservient to robust values such embracing the poorest in the city first in envisioning a future and to the impulse of gaining insight about the issues instead of speedy solution making.[22] It must have a strong ethical core such that it can employ its expertise effectively. Thus, a responsible architectural agency must derive its sense of purpose through commitment towards a critically defined, socially relevant task that benefits everyone.

The newly independent India had a precedent in its recent colonial past in the form of colonial modernity. In ways similar, if not identical, this neoliberal world has a precedent in the developmentalist vision of the Nehruvian state that gave birth to a range of modernist practices. Nehruvian India failed to put decolonization on stage, the globalized world, similarly, should not overlook the inherent exploitative effects of rampant commercialization on people, ecology and economy. Thus, the work of Aditya Prakash is revisited and presented not merely as a regional case study but as a significant work owing to its persistent enquiry on how design can serve the interests of the poor man.

Implicit in this task lays his own engagement with the inherent contradictions explored in the context of Chandigarh. Chandigarh remained a conceptual and empirical site for his ideas on urbanism even as he learnt from outside influences, nationally and internationally.

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[21] ibid
[22] Ravi Aggarwal talks about this in the context of ecological debate surrounding the river Yamuna in the documentary : Delhi- Work under Progress

In sum, without pretending to move towards definitive answers, this thesis keeps this particular triad of precedent, deruralization and architectural expertise in the background as it traces the common man project in the urbanism concepts of Aditya Prakash.

Introduction to Chapters

Chapter 2 presents the story of the making of Chandigarh, the birth of Indian modernism and the aspirations of the Nehruvian Vision. The Chandigarh Plan we know today is a result of a series of iterations and in tracing the development of the plan, this chapter presents the influence of the colonial past in post-colonial India; at times strongly turning to the west for precedents and at others, in defining a vague notion of "indianess" in the designing for India. It introduces Aditya Prakash and his engagement with the Capital Project. It presents a brief biographical sketch, motivations for joining the Project and his learning process at the Chandigarh (Capital Project) School with a focus on his interactions with Le Corbusier.

Chapter 3 describes the time after the completion of the Chandigarh Project when Prakash moves to Ludhiana to design the Punjab Agricultural University. This chapter presents the Prakash's observations of an Indian city and the ways in which it was similar and different as compared to Chandigarh. Impressed by the Nehruvian mandate of building a city as executed by Le Corbusier, Prakash decided to explore the contradictions he observed during his time in Ludhiana, absorbing the scientific worldview of the green revolution. It presents his effort to research and study the Indian cities, particularly the villages, as rural India was the 'real' India. Moreover, it looks at his role as an educator carrying out research alongside his students on Chandigarh villages with the intention of identifying where the Nehruvian vision failed. The insight gained here was used to develop ideas culminating in sustainable urbanism concepts. The rehri design or the pushcart design is one such example. The empirical approach to design demonstrates the struggle to address the city as it is while attempting to steer it in the direction of what it should be.

Chapter 4 discusses the factors that shaped the sensibility of sustainability of the common man urbanism of Aditya Prakash. The sustainable urbanism model was later incorporated into the Linear City concept that was designed as a new possible capital of Haryana. Here, Prakash is influenced by the discourse on Chandigarh at that time and his transnational connections in generating a formal response that he believed would address the issues he identified as crucial in designing for the common man.

2
PRAKASH – CAPITAL PROJECT

Aditya Prakash (10 March 1924, b. Muzaffarnagar – d. 12, August, 2008 in Ratlam) began studying architecture at the Delhi Polytechnic (now School of Planning and Architecture) in 1945. In the middle of his course, India's independence forced the English faculty leading the Polytechnic to return to England. At their suggestion, Prakash also moved to London in August 1947 and began to attend evening classes in architecture at Reagent Street Polytechnic (now University of Westminster), while working with W. W. Woods during the day.

After becoming an A.R.I.B.A. in 1951, Prakash moved to Glasgow where he briefly worked and studied art at the Glasgow School of Art. Prakash left the United Kingdom and returned to India where he joined the Chandigarh Capital Project team as a Junior Architect on the 1st November 1952.

During this time he designed several public buildings in Chandigarh, including the District Courts Building in Sector 17, the Jang Garh (Marriage Hall) in Sector 23, the Indo Swiss Training Centre in Sector 30, the Government Of India Textbook Press in Industrial Area Phase – 1, the Central Craft Institute in Sector 11, the Tagore Theatre Sector 18, the Chandigarh College of Architecture in Sector 12, the Corbusier Hostel in Sector 12 and the Behl House in Sector 18.

 He was also responsible for creating the Frame Control of Chandigarh. One of Aditya Prakash's key designs was that of the Chandigarh College of Architecture (CCA) which was based on the design of Le Corbusier's Chandigarh College of Art. His most significant project in Chandigarh was the Tagore Theatre which he designed in 1961 for the centenary of an Indian poet and philosopher Dr. Rabindranath Tagore.

JANJ GHAR

Architect : Aditya Prakash

In the Indian context one normally understands a Janj Ghar to mean a place where groups visiting town to attend marriages, can stay. Normally all other functions connected with a marriage take place at the bridal home. This practice is bound to change in the developing pattern of cities in which small apartments will increasingly be the rule. But since an Indian marriage ceremony requires a lot of space, therefore it was decided that for Chandigarh a Janj Ghar should be provided with facilities for performing marriages, dinning areas, and residential accommodation for guests of the bride and bridegroom. In designing it the ritual of Indian marriages, which are supposed to be performed under the open sky, has been kept in mind and so an unglazed eye has been left in the shell roof of the marriage hall which also helps to provide an outlet for the smoke from the fire round which marriage ceremonies are performed. This hall is connected by a passage-way to the living and other areas.

A lot of open space has been left around the building so that plenty of room is available for an over flow of guests and their festive activities.
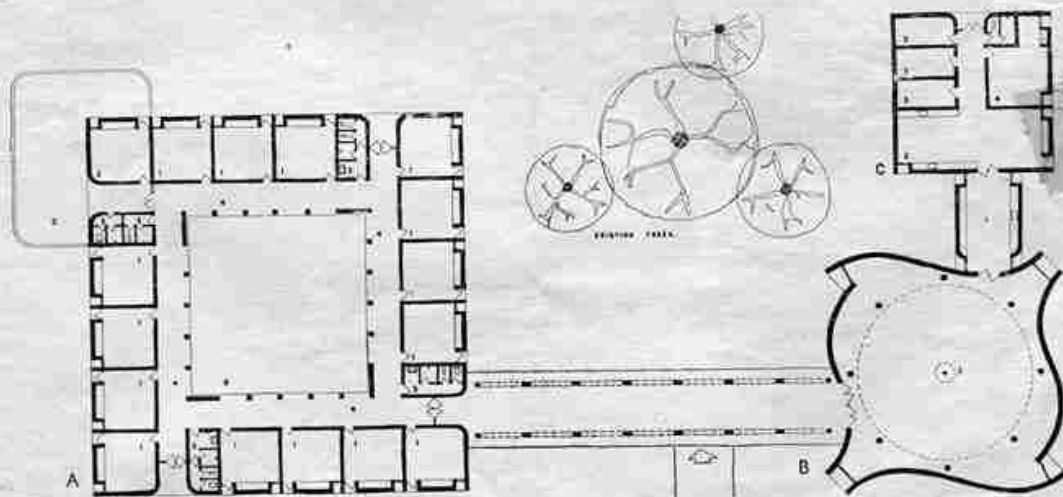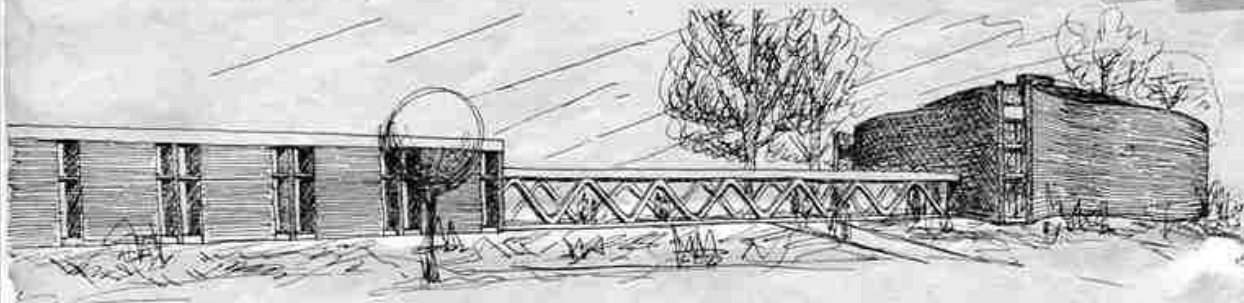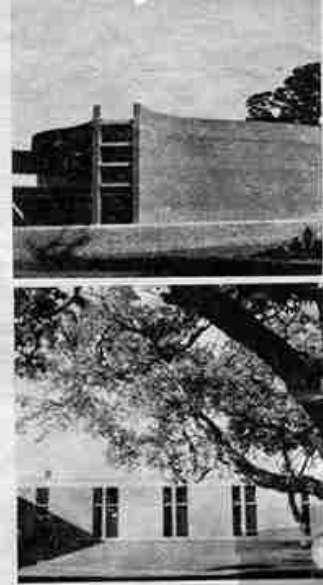
A. Dormitory Block
1. Rooms for marriage party 2. Bridal suite
3. Lavatories 4. Verandahs 5. Paved court

B. Marriage Hall
For ceremonies receptions and dinners
1. Saucer Dome 2. Unglazed eye

C. Kitchen Block
1. Pantry 2. Kitchen
3. Stores 4. Caretaker

Figure 7 Image from Aditya Prakash Foundation courtesy Vikram Prakash.

Figure 8 Image of the Bus Stand, Jagat Cinema and the District Courts in Sector 17, Chandigarh. Courtesy Vikram Prakash.
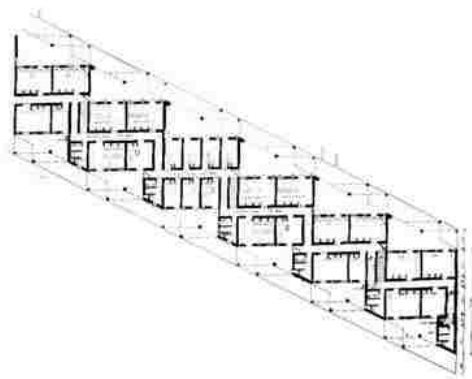

Figure 9 Image of the Corbu hostel, Courtesy Vikram Prakash.

In 1963 Aditya Prakash moved to Ludhiana to design the new Punjab Agricultural University. In 1968, Aditya Prakash returned to Chandigarh as the Principal of the Chandigarh College of Architecture. Early in 1970s Prakash became an ardent champion of sustainable architecture and urbanism, as what he called 'self-sustaining settlements'. He published several articles and wrote a critique of Chandigarh planning under this title. After retiring from CCA in 1982, Aditya Prakash opened his own private design practice under the name of Arcon Architects, which designed several projects in North India, including a housing complex for the Reserve Bank of India in Chandigarh, Milkfed Milkplants, Rohtak and several administrative buildings for the Agricultural University in Rohtak. Prakash effectively closed down Arcon Architects in c.1990 and practiced as a full time painter until his death in 2008.

Chandigarh Capital Project

Today the city of Chandigarh means many different things to many different people. The Chandigarh experiment today is a 'multivalent text, an imagined environment…a space of competing representations, which will always elude stable descriptions".[23]   At the time of its conception on modernist lines the site chosen through aerial reconnaissance was free from the "encumbrances of old towns and old traditions"[24] as it was "a new city... developed and built up entirely from the beginning'[25] but it did displace existing villages, therefore, carrying a contradiction. Although, the city was built to rehabilitate refugees coming into the Punjab region in large numbers from Pakistan because of India's partition it also aspired to represent the *creative genius flowering on (our) its newly earned freedom*[26], the need for a capital arose out of the practical need for a capital for the Punjab region as the old capital Lahore went to Pakistan.[27]

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[23] Takhar, Jaspreet, and Vandana Babbar. *Celebrating Chandigarh/editor, Jaspreet Takhar*. Chandigarh Perspectives in association with Mapin Publishing Pvt. Ltd., 2002.p
[24] Nehru's Speech during the inauguration of chandigarh in 1953
[25] Chandigarh scan – find out the book name from the ISBN
[26] Takhar, Jaspreet, and Vandana Babbar. *Celebrating Chandigarh/editor, Jaspreet Takhar*. Chandigarh Perspectives in association with Mapin Publishing Pvt. Ltd., 2002.p
[27] Kalia, Ravi. *Chandigarh: The making of an Indian city*. New Delhi: Oxford University Press, 1999.

Several other smaller towns were considered, before they lost to the current site for various political and administrative reasons such as proximity to Pakistan, size and lack of existing infrastructure. [28]

Figure 10 Image as appeared on thestar.com, Article titled: The Indian city on a quest to clean up slums Courtesy Dennis Lee Royle / The Associated Press File Photo.

Much before the current plan of Chandigarh was finalized, several precursory ideas gave it direction. Among the first people to formulate the design brief for the city was A.L.Fletcher, an ICS cadre bureaucrat put in charge on the project. Fletcher's vision drew directly from the Garden City concept that called for the segregation of the capital into three small units – an Administrative center, a University Township and a Satellite Industrial Town. His expectation was that they would function by relying on motorized transportation to connect these cores. Fletcher's view, based on a conservative estimate of projected growth had prevailed over that of P.L Varma's, the Chief Engineer's, who was more in favor of having an international competition, before formalizing the brief.[29] In 1949, Fletcher's brief was handed to Albert Mayer, an American Town Planner who was

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[28] ibid
[29] These are the archives known as the "Randhawa Papers" held in the City Museum, Sector 10,Chandigarh.

chosen for the project given his past experience planning Garden cities in the United States (although he was building Model villages in India.) Mayer came up with a plan in 1950 in collaboration with Clarence Stein, which still had the Garden city principles intact. Organized around a vehicular circulation system, with the administrative Capitol in the North and the commercial complex in the middle, the city was divided into self-contained neighborhoods

Figure 11 Image plate juxtaposing the Mayer and Corbusier's plan for Chandigarh

called the 'superblocks'. These superblocks housed basic facilities like housing, market, schools, hospitals etc.[30]

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[30] Prakash, Vikramaditya. *Chandigarh's Le Corbusier: the struggle for modernity in postcolonial India*. Seattle: University of Washington Press, 2002.

Mayer's fan-shaped plan and subsequent sector detail ascribed to a vague notion of "indianess" that was also in his opinion- modern. The indianess he refers to was expressed in accommodating roadside kiosks and other activities abstracted from an Indian bazar into the plan. Mathew Nowicki, a polish architect who was brought in to visualize the plan, produced sketches that also bore semblance to this "indianess". Evidenced in his sketches was the intimate scale of urban spaces, decorative treatment of surfaces and undulations to the skyline.[31] After Nowicki's death in August 1950, Jane drew and Maxwell Fry a husband/wife architecture team was approached to complete the project. The agreement reached with them however was only to mainly work on the housing projects and along with a few small-scale buildings, owing to their prior commitments. Eventually, an initially reluctant Le Corbusier agreed to do the big state projects on the condition that his cousin Pierre Jeanneret is hired along with himself on the project.[32]

Chandigarh was designed primarily as an administrative city and not an industrial city. Thus, it became to be classified as the 'radio-concentric city of exchanges' as opposed to the 'linear industrial city'. Chandigarh was imagined as a center of decision-making and consumption devoted to cultural and creative activity. This gave the city its basic identity.[33]

Chandigarh, a modernist city, was conceived in the name of its people set against the backdrop of villages. It was an idealized conceptual model, strong ordering system that presented a model for how a new nation could move ahead. But in reality, it repeated the colonial view where the rural was present at the fringes to support and be subservient to the urban activities. Although Chandigarh provided a serene urban ambience for the elite, the rural life was rendered out of place in the city. This contradiction is best described by Gandhi who felt that Nehru wanted the

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[31] ibid
[32] ibid
[33] Sarin, Madhu, Khan, Hasan-Uddin, Julian Beinart, and Charels Correa. "Le Corbusier: Chandigarh & the Modern City" Chapter Socio-Economic Change and the Poor,*Ahmedabad: Mapin* (2011).

Englishmen to leave but *angreziat*[34] to prevail whereas Gandhi felt that Englishmen must be our friends while India recognizes its essential rural nature and adheres to a village lifestyle. This observation of the rural life and its paradoxical relationship to the city of Chandigarh is at the heart of Aditya Prakash's search for a balanced concept for urban living in marrying the essential rural nature to the in-evitable impulse for modernity. Yet, in manifestation, it is decisively compartmentalized so that both the rural and the urban could simultaneously interact and retract.

Aditya Prakash worked with Le Corbusier directly on the School Of Art or the Audio Visual training Center, as Le Corbusier called it. He described the office environment at the Capital Project as one where each project was 'explored in its own right'[35]; a process that encouraged unencumbered engagement with design. At the same time, he acknowledged the non-tabula rasa nature of work owing to the steady atmosphere of research as an active component of design.[36] In retrospect for him, the years spent with the Capital Project became his actual training ground as an architect. Immersed in the process since its inception, his work has since been in a constant dialogue with the vision for Chandigarh as conceived by the Capital team. The office, despite its hierarchical imperial set up, employed transparency and openness in discussing the various projects its team handled.[37]

From Prakash's standpoint, the coming of Le Corbusier to India was akin to an architectural revolution.[38] He also noted that, while India had a lot to gain from this Corbusian presence, Le Corbusier himself must be grateful to India as it provided him a free reign to design an entire city. The universal, positivistic and scientific lines on which Le Corbusier's architecture was based resonated deeply with tradition in Prakash's opinion. A powerful example he used to make his

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[34] Lang, Jon, Madhavi Desai, and Miki Desai. Architecture and independence: the search for identity--India 1880 to 1980. New Delhi: Oxford University Press, 1997.P182 – angreziat literally translates as Colonial ways of the British Empire.

[35] Audio File of Aditya Prakash's Interview.

[36] ibid

[37] ibid

[38] Cornell Symposium Speech, *Le Corbusier's Chandigarh – Architecture and the Cultural Context* (1990)

case is that of Le Corbusier's invention and adherence to the *modulor*. He observed that Le Corbusier was the only architect in the modern times to lay down a rule for proportioning while others used personal judgment.[39] He added, that the traditional Indian sculptures were cast to the proportions that were laid out in the scriptures. This idea of Le Corbusier as a deeply traditional man was in contrast with the popular opinion that Le Corbusier's modernist architecture rejected tradition. The Nehruvian vision of building a city unfettered by the traditions of the past was more dominant in the way Chandigarh was imagined and understood as a city.

> Many see in Le Corbusier a rejection of tradition and culture. I see in Le Corbusier an affirmation, even an assertion that we cannot and must not run away from tradition and culture.

For Prakash, the basic principles of geometric proportion that formed the basis for many of the natural systems were harnessed in traditional building practices. It is in this sense that the Corbusian approach can be viewed as traditional as he searched for underlying generative principles along which life could be structured. This, Prakash writes, is reflected in Le Corbusier's view that cities must be given a form and therefore a direction. This is seen in the Chandigarh city center which is based on a grid that is derived from the Modulor proportions, accompanied by a height control of four floors so it could be accessed by foot. The most significant lesson he learnt was to look for the seed for 'solving' any design 'problem', which for him lay in the generative system. He worked on the design of the school of art that had been languishing but was taken up by Corbusier once 'it was ripe in his mind'. Le Corbusier has been playing with the idea of what a school of art should be as it can be seen from his act of thinking an appropriate name for such a school – the audio visual institute.

Aditya Prakash recounts for A+D magazine article the design process of the School of art. Le Corbusier conceived the basic unit on a 'foolscap' paper on which columns were drawn guided by the harmonic dimensions he drew with expertise. He repeated the process to generate a

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[39]Cornell Symposium Speech, *Le Corbusier's Chandigarh – Architecture and the Cultural Context* (1990)

section by projecting the columns upward. The section, an upward curving concrete roof, not only came to provide a distinct architectural stamp to the building but it also expressed the materiality of the concrete. This gesture opened the basic studio unit to a flood of (north) light that Le Corbusier imagined to be of vital importance in a school of art.
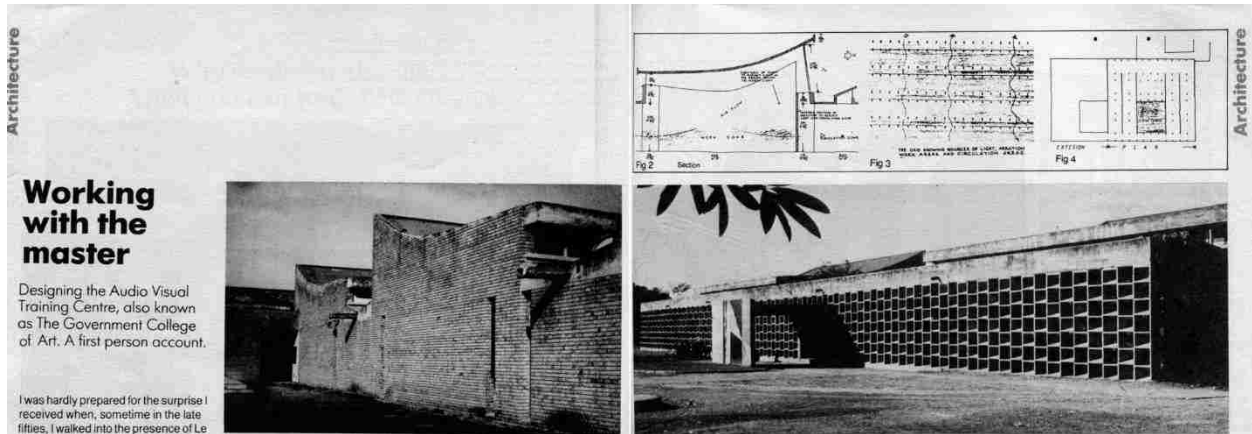

Figure 12 Images of the Section of the School of Art as it appeared on the InsideOutside Magazine. (Mar/Apr 1985)

On a subsequent visit by Le Corbusier after six months, he found Aditya in his office working on the design for the Tagore Theatre. A design of the chair of the theatre was drawn full-scale on a blackboard wall like the one in Atelier, Paris. Le Corbusier approved of the method and redesigned, with Prakash's assistance, the entrance vestibule. 'Perching on the stool' Le Corbusier dictated the precise dimensions that Aditya Prakash drew on the blackboard.[40]

Prakash observed in Le Corbusier a disregard for mundane details as he was displeased with Prakash for completing the grid pattern with accurate brick courses. He felt the exercise was futile as it dispersed the moment of inspiration in favor of an 'accurate' representation. This sensibility also reflected in Le Corbusier overlooking the brief given by the department of industries – the clients. He instead invented the program of the school; christened it 'the audio visual institute', thus defining the program and its focus autonomously.

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[40]Khan, Hasan-Uddin, Julian Beinart, and Charels Correa. "Le Corbusier: Chandigarh & the Modern City" Chapter Socio-Economic Change and the Poor,*Ahmedabad: Mapin* (2011). p 59-70

For Prakash, the fundamental lesson he learnt from Le Corbusier was to look for the seed of a problem and he applied it in contexts both architectural and beyond. Prakash admits that he learnt everything from le Corbusier *even if it meant going against him*.[41]

Thus working with Le Corbusier at the Capital Project office pushed Prakash to disregard what he had learnt so far at Delhi Polytechnic and later what he picked up at London. At Delhi Polytechnic he felt that a design was designed to be sold to a client whereas, under Le Corbusier and Pierre Jeanneret, he interpreted that an architect's role as one that goes beyond mere authorship to develop one's 'own understanding of the issues keeping the larger issues of environment and urbanism in mind'.[42]

At the outset of the Project in 1952, Aditya Prakash was assigned to work with Jane Drew on the Type 6 house and the Maternity Hospital in Sector 16. He was called the 'junior most of the junior architects'. He did not immediately grasp concepts like the Modulor, or the CIAM grid but he learnt fast and familiarized himself with the terms and their significance, like his teammates did soaking up the Corbusian worldview. He built several buildings in Chandigarh (table) but his most notable buildings were The Tagore theatre and the Chandigarh College of Architecture (CCA).

The Theatre was not initially listed under the Capital Project but was built as part of what each state in India acquired to mark the centenary of Indian nationalist and poet Rabindranath Tagore in 1961. CCA, on the other hand, was made for a new college of Architecture re-using the design of the School of Art to a different site. This set up the issue of complex authorship.[43]

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[41] ibid
[42] ibid
[43] Chalana, Manish, and Tyler S. Sprague. "Beyond Le Corbusier and the modernist city: reframing Chandigarh's 'World Heritage' legacy." Planning Perspectives 28.2 (2013): 199-222.
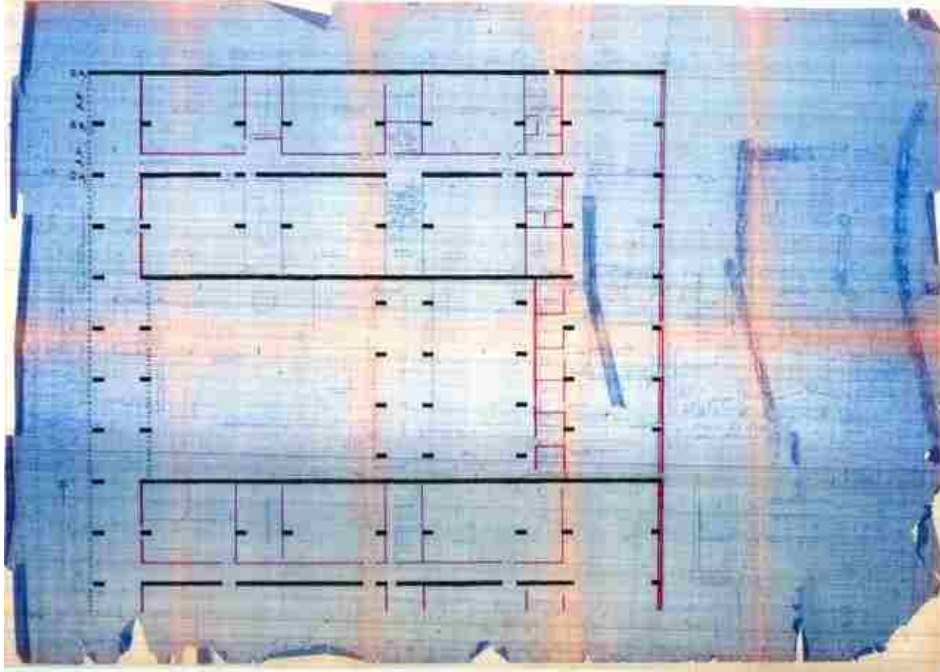
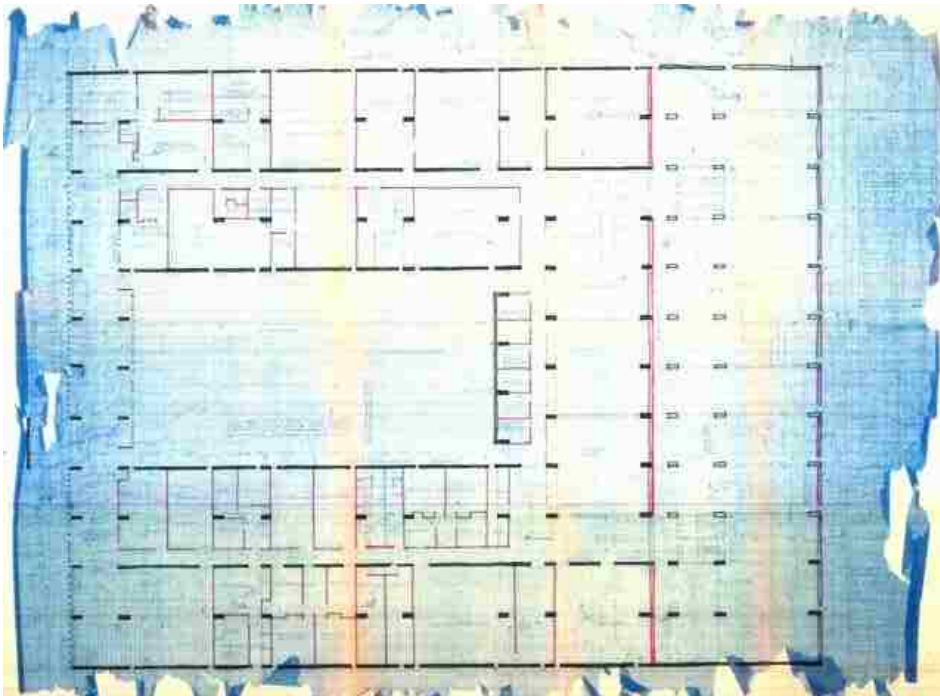*Figure 14 Blueprint of the School of Art building, Courtesy Aditya Prakash Archives.*

Figure 13 Blueprint of the Chandigarh College of Architecture, Courtesy Aditya Prakash Archives.
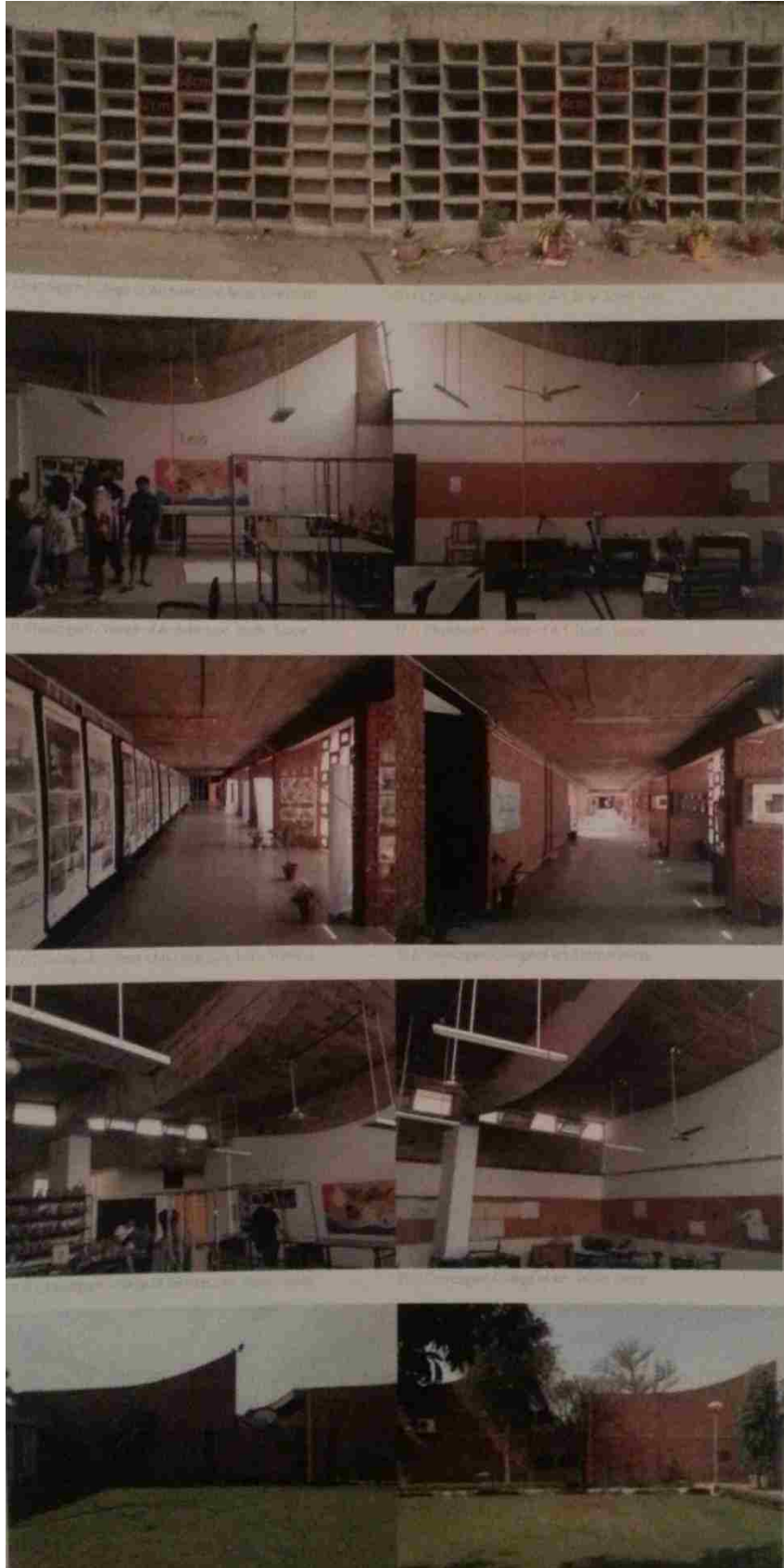
Figure 15 Image of CCA (left) and School of Art (right) Courtesy James Donaldson from a study done for Chandigarh Urban Lab, Indian Modernism (2014)

Although, the original design was by Le Corbusier, the design was realigned to fit a smaller budget and a different site condition manifesting arguably the central impulse of Indian modernism.[44]

The juxtaposition of the plans of the two schools suggest that CCA shows deviations from the plan School of Art (GCA i.e. The Government School of Art). The translation of the design from GCA to CCA is not one of formulaic coherence. It is constantly seeking to re-situate the 'original' on a new site where column sizes vary slightly. Examples of that effort is evident in Prakash's Indian Modulor, designed to work with the Indian brick dimensions with the building scaled down so it sits on its new site.

Prakash explored the principle of that "system" or the seed – the generic principle in his design for the Tagore theatre. He 'juxtaposed two squares on their diagonal axis – one for the auditorium and the other for the stage area and their meeting point became the dais.' This idea came to him as he searched in his sketches the metrics of what Pierre Jeanneret (PJ) considered "A design". Initially it was PJ's own design that was to be detailed and built. Prakash, amidst the discussion on PJ's design, presented his own concept for the Theatre. PJ was 'struck by the vitality of this idea' and chose it over his own scheme rendering himself humble in Prakash's eyes.[45] PJ's commitment to the city of Chandigarh and his personality when compared to Le Corbusier, was more agreeable to the Indian team. They were prompt in equating him to a Mahatma while Le Corbusier remained an arrogant genius.

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[44] As argued by Vikram Prakash the central impulse of Indian Modernism imagines what the master would have done had he been there.
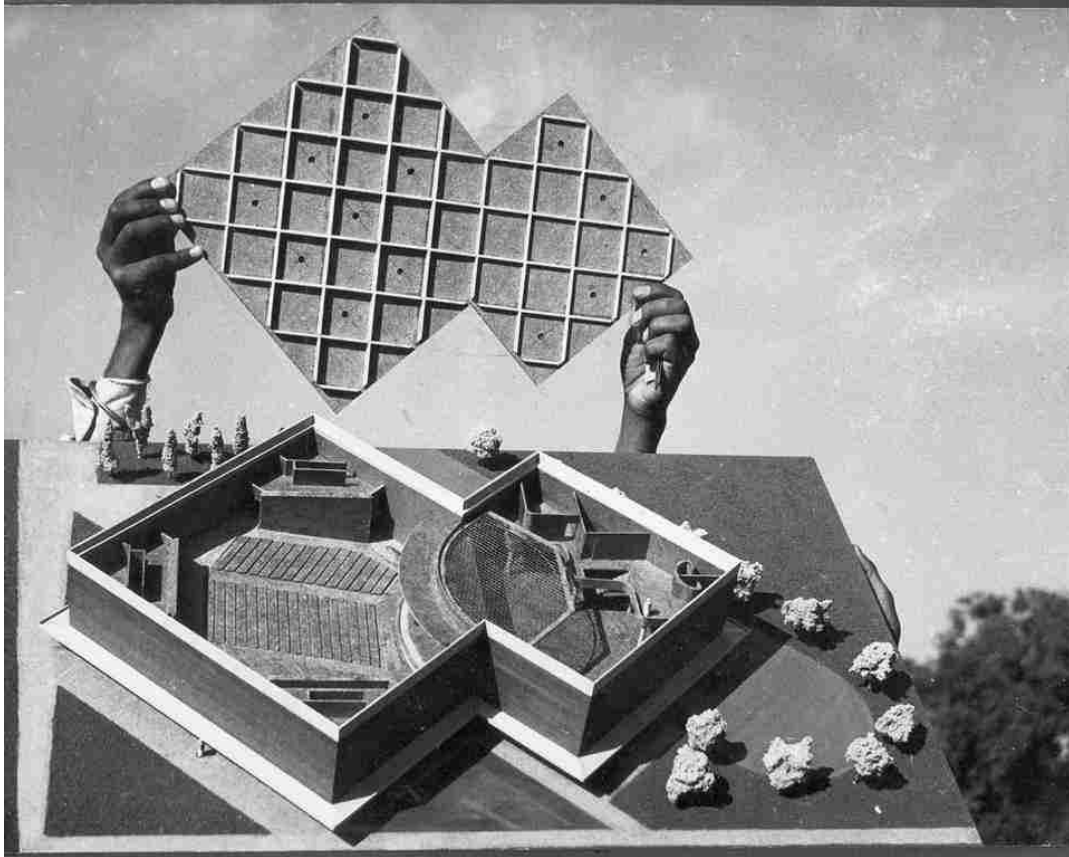
[45] Khan book interview

Figure 16 Image of the model of Tagore Theatre where the roof is held up by Giani Rattan Singh (the model maker). Image Courtesy Vikram Prakash

Tagore theatre was in itself, a simple design at first glance, as it responded effectively to its programmatic requirements as well as the architectural context of a newly acquired fervor for modernism. The core of its strength as a design lay in its sense of formal brevity, which when experienced from inside, played visually with perspectives that were perfectly geometrical and yet novel, even surreal to the human eye. The outer façade that forms an envelope around the two overlapping squares is built entirely of brick, insulating the inner spaces from the humdrum of the outside world. The niches left by the puncture of the scaffolding are covered using glass pieces that let in an occasional stream of light into the auditorium. One can conclude that Prakash carefully chose the lessons he imbibed while on the capital Project, as he questioned it was always tying it to his own architectural worldview instead of only participating in rituals that accompanied someone as colossal in stature as Le Corbusier.

Figure 17 Image of the interior of Tagore Theatre as it appeared in the Journal of Indian Institute of Architect 1965.

Figure 18 Image of the plan with interlocking squares and the exterior of the Tagore Theatre as it appeared in the Journal of Indian Institute of Architects 1965
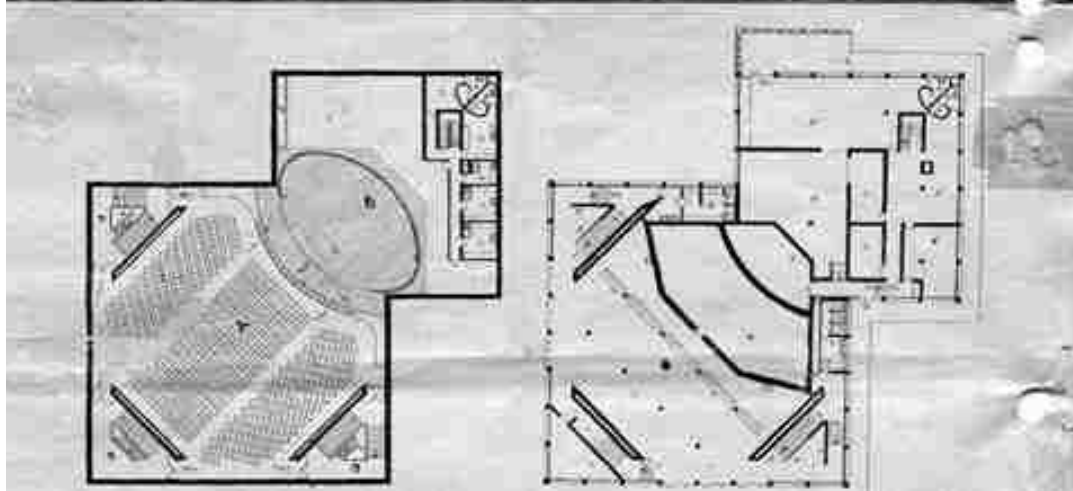
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LUDHIANA RETURN TO CHANDIGARH

After his time at the Capital Project, Aditya Prakash moved to Ludhiana to build the Punjab Agricultural University as the senior architect. At a time, when the entire world was moving towards agricultural mechanization, India specifically was receptive to the movement under Nehru's administration. Particularly, the 'universities formed the academic core of this transnational transfer of knowledge' and 'Ludhiana was also being transformed into the nucleus of the Kennedy-Johnson sponsored so-called "green revolution"—'an extremely successful but ultimately toxic process designed to multiply the agricultural output of Punjab by transferring the latest "science" of high-yield seeds and crops to the area along with, of course, the accompanying pesticides'.[46] Ludhiana, located in Punjab Region, is the heartland of fertile agricultural region of North India. A team of rural sociologist and an agricultural economist along with poultry man dairy cowman were sent to India from Ohio State University at the request of Pratap Singh Khairon - the then chief minister of Punjab.[47]

As Prakash designed the university campus, he was beginning to get exposed to the realities of the Indian way of life, simultaneously encountering the old city of Ludhiana. In his own words

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[46] Prakash, Vikramaditya, *Double Framed: The Architectural Photography of Aditya Prakash,* ARCADE(2013) 31.4
[47] Interview with Professor T.Scott Sutton by Professor Robert Sutton, February !0, 1984

he realized the dichotomy that existed in the thinking processes of architects and Planners'. He was wary of impervious and violent nature of boundaries that he felt 'destroyed the fabric of the city and lines of communication'[48] territories and zones. He was critical of the civil lines that divided the city on the lines of prosperity and the bypass roads that separated the town from its villages created much chaos in the process.[49] He felt that the exclusive atmosphere the civil lines offered a handful of wealthy people came at the cost of cutting it away from the rest of the city. In dividing the city as sharply, it was violently marking out territories keeping most of the city out. The bypass roads again were false boundaries that divided the rural and urban arbitrarily, destroying the actual nature of the continuum between the two, contributing to severe bottlenecks.

Moving away from Chandigarh that served as an intense training ground, Prakash become more mindful of his built environment now viewing it through the lens of an experienced architect. He became aware of the ways Ludhiana was different from Chandigarh despite a shared ethno-cultural background.

At Ludhiana, he was exposed to the scientific worldview borrowed from the west that brought forth an exponential rise in the production of crops. According to an account by Professor Sutton, team lead from Ohio State, the rise in crop production was steep; the percentage of wheat thrashed by the machine went up from 1% to 99% as the entire area transformed into a mechanized agricultural zone. Prakash was impressed by rise in production of crops that yielded surplus for export. Such a scientific feat impressed Prakash while he was the chief architect, designing the massive campus and allied infrastructure.

The campus stood as a counterpoint to the city of Ludhiana that Prakash described as filthy, overtaken by dirt and squalor of the inner industrial core. The standard Indian City was far away from the city he had helped build in terms of time and order or the lack of it. His pictures

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[48] PRAKASH, ADITYA. "FUTURE OPTIONS." *Celebrating Chandigarh* (2002): P138
[49] ibid

of the old town reveal the state of decay that Prakash attributed to the lack of scientific planning. For him, the design of an Indian city acquired a new meaning, prompting a perspectival shift from narrowly defined aesthetic considerations.

Figure 19 Images taken By Aditya Prakash of the Inner City of Ludhiana- Cow on the Road. Courtesy Aditya Prakash Archives.

Figure 20 Image taken by Aditya Prakash of the inner city of Ludhiana- Aerial view of the congested city. Courtesy Aditya Prakash Archives.

Figure 21 Image of the inner city of Ludhiana - An 'organic' roundabout. Courtesy Aditya Prakash Archives.

Return to Chandigarh

Prakash was a versatile administrator and educator. As the principal of CCA, he left an impression on his faculty and students alike for his refreshing view on a variety of topics including his own role in the School. He recognized talent and created opportunities for his faculty and students. Even as Indian education system was deeply entrenched in its colonial roots, Prakash was relentlessly multi-disciplinary in his approach to teaching and administration. He used his skills as a designer beyond its scope as a subject to be taught in classrooms to an active way of engaging with the world. Remembering Prakash as the 'literal and symbolic maker of Chandigarh, Prof. Rajneesh Wattas pays a tribute[50] to Prakash who was instrumental in the making of the Chandigarh College of Architecture:

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[50] Wattas, Rajneesh, *A Tribute to Professor Aditya Prakash(1923-2008),* A+D(2008) 25.9

"And there could not have been a better man to do this Job. For he, combined in him numerous qualities beyond mere architecture – to be a great thinker, educationist, visionary, superb speaker, and above all, a very fine human being. He was like a one man – university, a guru in the Traditional Indian mould and a fatherly figure with the joi-de-vivre of a child."

His former students and colleagues recount multiple anecdotes of him transgressing known norms and protocol with the motivation to address larger issues. An architect and Chandigarh old timer, Pallav Mukherjee recounts that if it was not for Prakash's insistence, he would have left Chandigarh and gone home to Calcutta. Prakash recognized the young graduate's aptitude and interest for the study of architectural structures and gave him the opportunity to teach in his school. He encouraged that he develop his own course work and teach the students how he would have liked to be taught.[51] Prakash opened up avenues for his faculty by organizing them into a team and bringing to them professional work outside of academia.[52] This was in line with his view that a good teacher must be a good architect as well as his hope that it would keep the faculty updated in skills and market trends.

He was also fondly remembered for introducing the *Jhola* (cloth bag) as a mandatory article when students went on study tours. At that time in India when the youth weaned away gradually from the sought after image of a *jhola* totting intellectual and were eager to run ahead of their times with impatience, Prakash idea proved useful in keeping the group from getting lost in a large crowd.

He did not consider his role as an administrator from the top, be it his insistence on going on the study tours with his students or him covering for the junior most faculty in his school. Prakash also contributed to architectural education by being one of the earliest educators to introduce thesis

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[51] Interview Pallav Mukherjee

at the undergraduate level, making it a more research based pedagogy. A student mentored by

Aditya Prakash - Sandeep Virmani recounts[53]:

> "Once as a young teenager, I mustered the guts to ask him what was the meaning of an abstract painting that hung in his drawing room, that he had recently painted. He put the book down, that he was reading and explained at length what it meant to him; and asked me to decide what it might mean to me! I believe, in retrospect, that that embodied the essence of his approach to education. A teacher, must share his/her own struggle and beliefs with all its beauty and sometimes gruesome detail; leaving the student to learn from this honest inquiry
> Once I shared a drawing of a female figure I had sketched with a renowned artist in the gathering, who went on to prescribe how I should draw it; and Aditya Prakash defended and encouraged my exploration into my style"

In 1968 Aditya Prakash came back to Chandigarh as the principal of CCA, determined to use this space as a ground for research on Indian cities following his experience in Ludhiana. He began by focusing on the villages around Chandigarh. This time, though, he saw Chandigarh in a new light: despite sharing a common culture with Ludhiana, Chandigarh was different in character. It did not spell squalor like Ludhiana did, but it also alienated the rural and informal sector, pushing much of it away. This propelled him to send his students into the Chandigarh villages and ask them how the Nehruvian experiment had worked for them. He conducted his own studies along with the students and published several papers.

Prakash observed the sterile environs of Chandigarh, devoid of the vivid presence of rural life that sustained Chandigarh. He began to describe the planning of the city as "escapist" and questioned the absence of people and life on the streets. At the threshold of post-modern times in India and opening up to criticisms on the city he helped build, the question of who Chandigarh belonged to and the flipside, who belonged to Chandigarh, began to occupy his mind.

His reflections on Chandigarh reveal his engagement with the lived experience of Chandigarh, a post occupancy analysis the built environment as habited by its people. He points to the seeming

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[53] Sandeep Virmani – A Response prepared in response to the questionnaire for the thesis 2014

dissonance between the Indian way of life and the built environment. Moreover, these observations were fueled by opinions of the people who felt that the city was "rukha sookha" or dry and unsympathetic. It was not just the starkness but the relationship of cattle, street hawkers that amplified the question of who the city was designed for. As Mulk Raj Anand writes that the concept of an abstract 'man' cast in a universal mold was used to represent the "human being". He described Le Corbusier's planning as one that had vacuums that needed to be filled with the needs of every man – the common man, the human being. He critiques that although the city was conceptualized in a socialistic pattern, much of the city ended up being too posh for the aspirations of the people in a society that was largely segregated on the basis of class. Prakash felt that despite being conceived as the capital city of Punjab, it did not hold out to the promise that it cares for the common man.
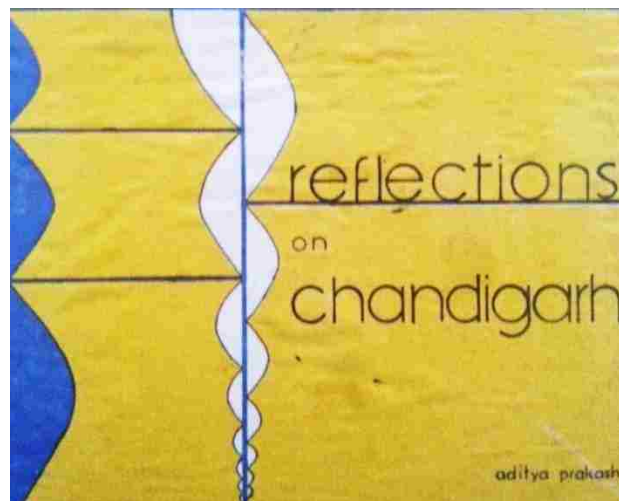

Figure 22 Cover Page of Prakash's Book Titled Reflections on Chandigarh

The presence of the rural in a designed urban environment was seen as an aberration in Chandigarh but Prakash advocated the presence of squatters and cattle and was sympathetic to their plight. Prakash perceived that the real reason for their invisibility was the economic and social structure of the life in the city. He is critical of the frame of reference of the urban planners and their lack of attention or sympathy to this facet of urban life. He calls their frame of reference to be flawed which neatly categorizes daily needs into various institutions, unmindful of the support infrastructure and the people it takes to run them.

He points out that "every decision maker, professional or administrative, works towards the realization of a dream of his own, which is often if not always far from the reality"[54]. Although, at that time he was complicit in the Corbusier's vision of a totalitarian man capable of seeing everything, he was sympathetic to that fact that even if the city is conceived as a machine, it 'must not reduce man into one, certainly not life into one for life refuses to be reduced'. [55]

He was beginning to see the reduction and deficiencies inherent in the grand vision in which Chandigarh was conceived and was compelled to reflect on the essential nature of the vacuums it held. It is in this context that he begins to use the term "escapist"[56] to describe the planning of the city. As though, in the dialogue of wills and vision the real issues had escaped attention; in the hope that the much romanticized view would in some roundabout way bear rewards for the poor.

In this context, Prakash feels that the city looks down at its common man with disdain if not with contempt.[57] Elaborating further, the disdain is not based strictly on a cultural paradigm, but for the communal way of life. He argues that the built environment of Chandigarh became more of a personal symbol of the man on the top than being accessible to those in whose name it was built in the first place. For Prakash, the disengagement of the common man whose inclusion would have made for a more authentic project was the heart of this "escapism". Through this critique one could discern what 'escapism' meant in the design and planning field of the built environment and what he clarifies that expertise should be – not creating monuments that dwarf the human scale and purpose but as a testament of creative endeavor that was inclusive of everyone[58]

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[54] Prakash, Aditya, *Reflections on Chandigarh.* Navyug Traders, 1983.
[55] ibid
[56] ibid
[57] ibid
[58] ibid

Prakash sent his students to the villages to study them but he also sent them with the view of knowing how the experiment of Chandigarh – the symbol of an independent India faired in their view.[59] In the process, he wrote a paper along with his student titled "Improving Chandigarh's Peripheral Villages" where he describes the villages as 'the lesser known counterparts of life' in Chandigarh. He puts into perspective how Chandigarh was built by displacing these villages in the genesis of this much celebrated modernist city. The paper was a scientific survey of how the villages were hubs of various small scale industries that catered to the city, and these complex inter-relationship with the city rendered these villages vital to the city. These villages were viewed either as an ecosystem in their own right or as ugly extensions to the city. Prakash, in his studies, intended to go beyond these notions and grasp the relationship of the rural and the urban on pragmatic lines of trade, making intermittent qualitative assessment of the nature of their daily lives.

Figure 23 Image showing parts of the paper on peripheral villages in Chandigarh by Rakesh Sharma, thesis guided by Aditya Prakash

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[59] Sandeep Virmani – A Response prepared in response to the questionnaire for the thesis 2014

In his strategies for improvement, his paper moved to the socialist and democratic nature of the state that must make available the basic amenities necessary for healthy living. He establishes the inevitable links between ideas of sustainability, the logic of the market and socially just practices. These ideas would form the central values of Prakash's later exploration of urbanism concepts.

Rehri Design

Aditya Prakash then progressed to address the presence of the informal elements in the city through the study of the Rehri or the Mobile shop. Rehri's are push carts used by vendors to ply their wares in the streets of the Indian cities. Based on his studies, Prakash lamented that although the rehris were the first to appear on a site to support development, they were the first to be evicted citing illegality once construction work was completed. He presented evidence in the form of ethnographic survey and statistics that mapped quantitative and qualitative aspects of the the rehri, to make a case that their demand was comparable to shops. He employed principles of design research to study their existing designs and extracted information on their use of materials. He presented reasons as to why the *rehri* was seen as a problem in spite of its role in cultural activities, in everyday life and in selling items that were uneconomic for a larger shop to invest in. He noted the relatively low social status of mobile shopkeepers was largely due to their illegal status that also corresponded to low economic standards.

These aspects were reflected on a closer look on his paper on the Rehris that formed the kernel of his approach to imagining the informal's relationship to the city. He makes a case for the rehris because of their inextricable link to the Indian way of life and for the convenience they offered along with carrying a diverse range of articles which could be sold to every strata of the society.

In studying the rehris, Aditya Prakash described the making of a derurlized[60] landscape which comes to life through the erasure of that which is central its life i.e. the subaltern subject. He

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[60] Derurulization, the term used previously in the paper that stands for urban- rural transformation, one that is viewed from the perspective of the rural as opposed the urban.

explained the central role they play in any development activity, often being amongst the first set of people to inhabit a particular site. He pointed at how they are pivotal figures in running a vibrant economy that is often not recognized by the legal bindings of a space therefore rendering them vulnerably unauthorized.

> "When there is development activity - whether extending a city or building a new one- who comes first? In India, apart from a few technicians, it is the building labor and the rehri (the mobile shop). When the development is over, both are driven out. Building labor moves to another developing site, so do the *rehriwallahs* the mobile shop owners). But some tough guys stick on to reap the harvest of their labors. They consolidate somehow against the law.

> However, it is fair to conclude that the building laborers and the *rehriwallahs* represent the economic standard of the country. This being so, it is important that we build from the bottom: any structure started midway is bound to fail."

He noted[61] that the tough guys stick on to reap the harvest of their labors and brought to the foreground the stake they held in the built environment, critiquing the lens that views them as perpetrators of squalor. He argues for a bottom up design, as he believes that the informal sector is the bedrock on which the Indian society rests.

The overwhelming dominance of the scientific and technical view is evident in how he addresses this issue through rigorous research driven by evidence and data. His scientific method covered both the ethnographic and the design research aspects intensively along with data on their location and use. Rehri became a critical object through which the issue of design for the subaltern was accessed. This is significant because he was not only thinking about what architecture should be when he proposed his own design for a rehri, he was constantly aware of what architecture already was. He weaves everyday aspects of life into a scientific inquiry accommodating for their direct implication on how built environment is shaped eventually.

He writes that there are ' as many rehris in Chandigarh as there are other shops (regular lawful ones)' and correlates their presence with the increased density of public space. The public space

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[61] Excerpt – Prakash, Aditya, *Mobile Shops in Chandigarh,* Architects Year Book (1974) v.14 p78-84

created by rehris are created informally around sectors, under the shade of a large tree. Studying the rehri carefully, he notes the dimensions (66 x 39 in wooden board mounted at the height of 34 in) along with costs (readymade 16 - 28 pounds and self-made 13 - 16 pounds), variations in design with shutters, Formica deck, protective umbrella and tarpaulins to keep the elements away.
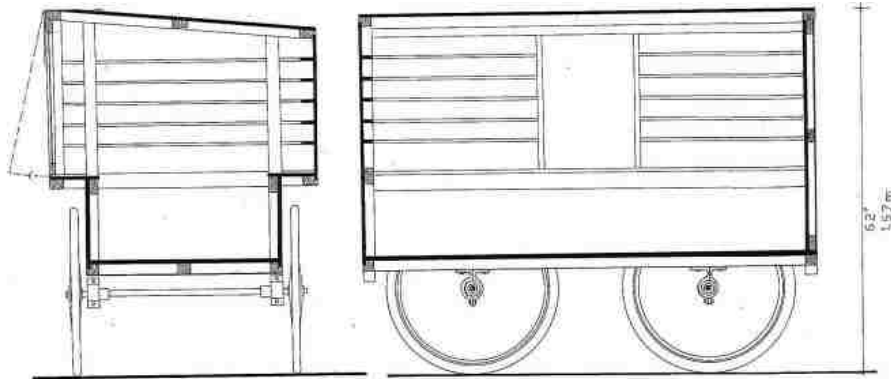

Figure 24 Elevational Drawing of the Mobile shop design by Aditya Prakash (1974)
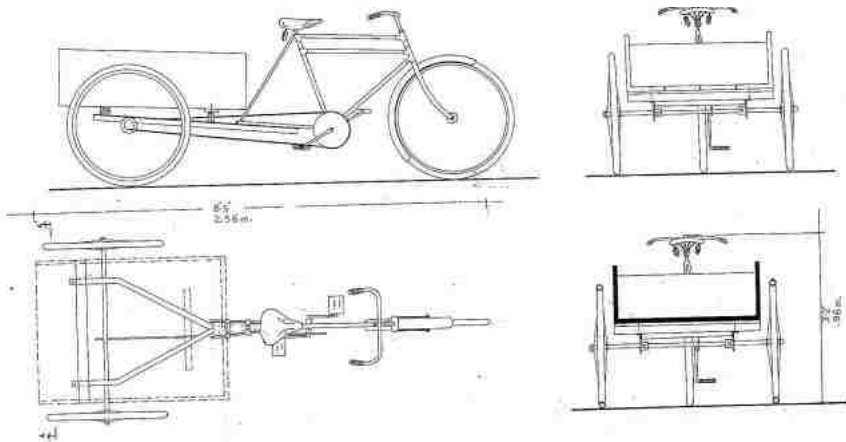

Figure 25 Sectional Plan and Elevation of the rehri design by Aditya Prakash (1974)

He used drawings and observations on cost and materiality instrumentally to explain his ideas as well as to study their complex relationship to how these carts were being used. He did not play up their ingenuity nor did he actively dress them down. His intention as a designer was to facilitate, by providing the necessary infrastructure applying his knowledge of form, anthropometry and materials to augment the designs that already existed.

This work could arguably be viewed as being significantly ahead of its time. The recent emergence of product design companies that invest in "empathetic design for the developing nations" use a similar framework to think about design. This is not to suggest a direct influence of the former on the latter but the imaginative leap that the rehri study takes.

Figure 26 Snapshot of the Design Manifesto of a Seattle based Design Company dealing in Human Centered Design
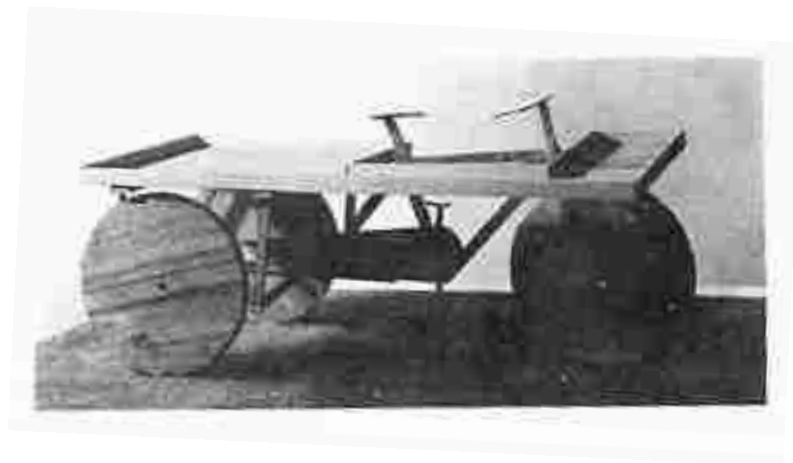

Figure 27 Wooden Model of Aditya Prakash's Design Proposal of the Pushcart. (1974)

Figure 28 Image of a contemporary cart design prototype

In immersing himself in the design exercise, Prakash also addressed those aspects that fall under the realm of policy making. As a case in point, he looked at the milk distribution scheme, where he proposes the integration of the rehri system such that it enables a more flexible circulation.

> On account of some of these reasons, milk bars have been started by some of the enterprising shopkeepers, who buy a large number of milk bottles from the dairy, and sell them at some extra cost from their shop at all times of the day (while they sell other things also) and also run a home delivery service on cycle-driven *rehri*. This works satisfactorily.
> Now if the milk distribution scheme had been planned on the basis of the cycle-*rehri* transportation and distribution system, how would this have worked, and would it have been an economic proposition?

He was careful to situate these ideas in Chandigarh perhaps because he was aware that a city that is designed since its inception is more receptive to design at the level of street furniture than other cities with many layers of urbanism matted into a complex terrain as in the case of Delhi. He is persistent in making the rural urban co-exist, borrow, share and shape each other by developing "profitable models" of exchange as in the case of the milk vendors.

> '...you flit from shop to shop, buy one thing here, another thing there. You bargain and you select, and you hear the full throated calls of the vendors extolling the virtues and low prices of their merchandise. You are attracted by the animated lively atmosphere. Is this not architecture? One of the considerations in aesthetics is the physical form. The normal shopping streets or squares can be said to have an architectural impact of their own. That is so, but that is not all. the apprehension about form arises from a lack of understanding of the architecture in the urban scene. Too often architecture is the art of providing space which is attractive, full of character and animated by the human presence. In this sense, the space where *rehris* are located is a much more lively place than any shopping street. It is not beautiful because we do not design for it, because we do not consider it worth our while to think about its potential for

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www.manaraa.com

goodness and beauty. Beauty can be achieved with very little additional expense and some thoughtfulness for human needs.

Further, he recognized how a *rehri* can become illegal if it becomes fixed on a spot due to the lack of urban infrastructure to support it. He cites the relatively low investment on the part of the government to provide proper rehri site than shops.

> "However, Chandigarh, though not accepting *rehris* as a regular urban institution, does provide a neat and serene environment which arouses a certain pride in people who live there. This is why the *rehriwallahs* there have a better economic status…
>
> "Conclusion
> The conclusions can be drawn as following:
> (1) Rehri create a lively marketing scene in any Indian urban situation.
> (2) By very little expenditure it is possible to create good rehri sites, and good rehri designs which will make a rehri market hygienic, and even beautiful.
> (3) For most of the items of merchandise, the rehris render a superior service to the customers.
> (4) In any development activity, or new town building activity, priority should be given for the provision of rehris and rehri sites."

> "...distribute papers to vendors or news-agents. Another observation - no place in Chandigarh is more than about 5 kms from any other point. Thus any place becomes easily accessible by bicycles. The required number of cycle-rehri vendors could be commissioned to collect milk bottles from the milk processing plant, and they could deliver the milk directly to the doorstep of each house. Each milk vendor could work out his own beat - like a newspaper vendor does."

Aditya Prakash was alive to the inextricable presence of the informal markets touching the mundane and the festive aspects of life. He appeals to the imagination of the architectural enterprise where it overrides the isolated considerations of form and function. Further, his approach could be argued as one embodying a sustainable sensibility in that it favors smaller spatial gestures to grand ones. He makes a case for a robust architectural practice as having agency and responsibility in addressing the urban rural exchange, interactions and continuities.

4

TOWARDS A SELF-SUSTAINING SETTLEMENT
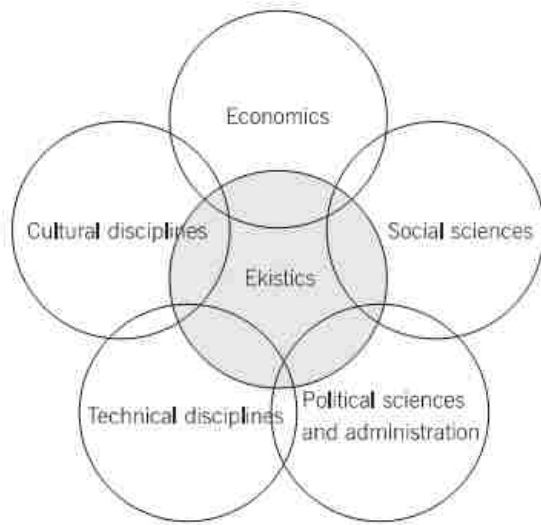
18.93 Diagram of ekistics and the sciences contributing to it

Figure 29 Source : A global History of Architecture, Mark Zarzombek, Vikram Prakash and Francis DK Ching, Feb 9 2011.

Prakash's work on *rehris* did not gain prominence until he showed it to Jaqueline Tyrwhitt of the Ekistics magazine on his way back from a conference in 1970.[62] A former secretary of CIAM, Tyrwhitt was already interested in *an alternative view of inhabitation*, and was involved in developing model villages for India. As a transnational group, Ekistics and its members like Tyrwhitt and Doxiadis, sought to 'marry regional climate and its geography to modernism'; moving away from the focus on self-expression.[63]Aditya was made the India correspondent of *Ekistics* by Tyrwhitt and eventually published several articles on his urban design concepts in the magazine. Jacqueline Tyrwhitt was one of the main people that championed the new science of Ekistics[64].

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[62] Takhar, Jaspreet. "Celebrating Chandigarh: Proceedings of Celebrating Chandigarh: 50 Years of the Idea 9–11 January 1999." *Chandigarh: Chandigarh Perspectives* (2001).P.138

[63] Ching, Francis DK, Mark M. Jarzombek, and Vikramaditya Prakash. *A global history of architecture*. John Wiley & Sons, 2010.P765

[64] He derived the term ekistics from the Greek word *oikos* meaning 'house' to refer to the science of human settlements.

She willingly took the role of the intermediary- 'the woman behind the man', working with influential thinkers like Geddes, Giedion and Doxiadis.[65] Central to the group that shaped the post-war modern movement, championing a new field of urban design, her work is known 'as part of the larger transformational shift towards a globalization of planning and urban design that had a human and ecological view much like Geddes'.[66]

> Arguably, Tyrwhitt's genius was in her ability to extend the influence of foundational anarchist Utopian planning ideals in the further development of post-war modernism by recognizing patterns that connect their multifarious expression across time zones and cultures, and bringing them together into a single thread of 'ekistical thinking' – aligned with an emergent 'postmodern globalism'. As an outsider – a woman in a man's world and a 'roving scholar–planner' – she occupied an interstitial position and acted as an intermediary: observing, synthesizing, organizing, effecting, editing and networking. Her outsider status was conducive to the formulation of new cross-disciplinary knowledge and concepts such as urban design and **ekistical thinking (that essentially involve making connections)** as well as to the creation of trans-border channels for their wide dissemination."

Tyrwhitt worked in the village settlements of the Nehruvian State as she documented the New Delhi Seminar for the Ekistics magazine from where the preliminary impetus was drawn towards UN's Global systems of research.[67]. Her efforts were focused towards globalizing planning and Urban Design principles that focused on the pragmatic aspect of geography and was committed to finding an alternative to sprawl. It had two facets – 'the macrocosm and the microcosm of which she was more confident theorizing about the former as it was a broad overarching vision of growth that concerned itself with large-scale urban systems.'[68]

Therefore her search was for an overarching pattern "for living in equipoise within a rapidly changing environment' by devising an optimal form of the intercity growth that avoided the pitfalls

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[65] Shoshkes, Ellen. "Jaqueline Tyrwhitt: a founding mother of modern urban design." *Planning Perspectives* 21, no. 2 (2006): 179-197.
[66] ibid
[67] ibid.p197-204
[68] ibid

of 'the sprawl' spurred by highway construction and post-war suburbanization'. This was a pursuit that echoed in Prakash's study of urban design.

She was particularly impressed by the Metabolists, the widely popular group of Japanese architects who were influenced by Kenzo Tange in the 1960s and were part of this 'movement (that) contends that the buildings and cities should be designed in the same organic way that life grows and changes by repeating metabolism.'[69]

Tyrwhitt was especially impressed by "Maki[70] (who) was part of a group of young Japanese architects and designers known as the Metabolists, who understood the connection between the roots of modernism and tenets of Japanese aesthetics, using them to invent a modern Japanese urbanism and architecture. The Metabolists solutions to the problems of rapid urban growth, 'while visionary, were actually grounded in the reality of the chaotic expansion of Tokyo—then the densest and fastest growing city region in the world—where regional planning based on British principles—green belts—had proven ineffective".[71] The essence of the Japanese Metabolist ideas resonated with both Geddes and the sensibility espoused by Buckminister Fuller in his general systems theory as described by the book[72] on Tyrwhitt's transnational life.

"Tyrwhitt's association with Maki, with whom she co-taught the urban design studio at Harvard in 1962-1964, and with whom she remained close afterwards, deepened her appreciation of the Metabolists's proposals, which in trying "to encourage the active metabolic development of our society" had an affinity with Geddes's idea…
…Another reason Tyrwhitt was attracted to the Metabolists is that their ideas resonated with general systems theory, as promulgated by two thinkers she admired: Kenneth Boulding and Bukminster Fuller."

Energized by these alternatives Tyrwhitt formulated ideas for the "Shapes of Cities that can grow" in a paper of the same title. She was of the opinion that cities needed to be given a direction to

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[69] http://www.domusweb.it/en/news/2011/05/03/metabolism-the-city-of-the-future.html
[70] Maki Fumihiko
[71] Shoshkes, Ellen. *Jaqueline Tyrwhitt: A Transnational Life in Urban Planning and Design*. Ashgate Publishing, Ltd., 2013.P.204
[72] ibid

grow, a view that Prakash eventually would come to hold strongly. In this paper she explores the ideal urban forms with the premise that formal utopia consciously or unconsciously, for better or for worse comes before the act of giving a direction to the city.[73]
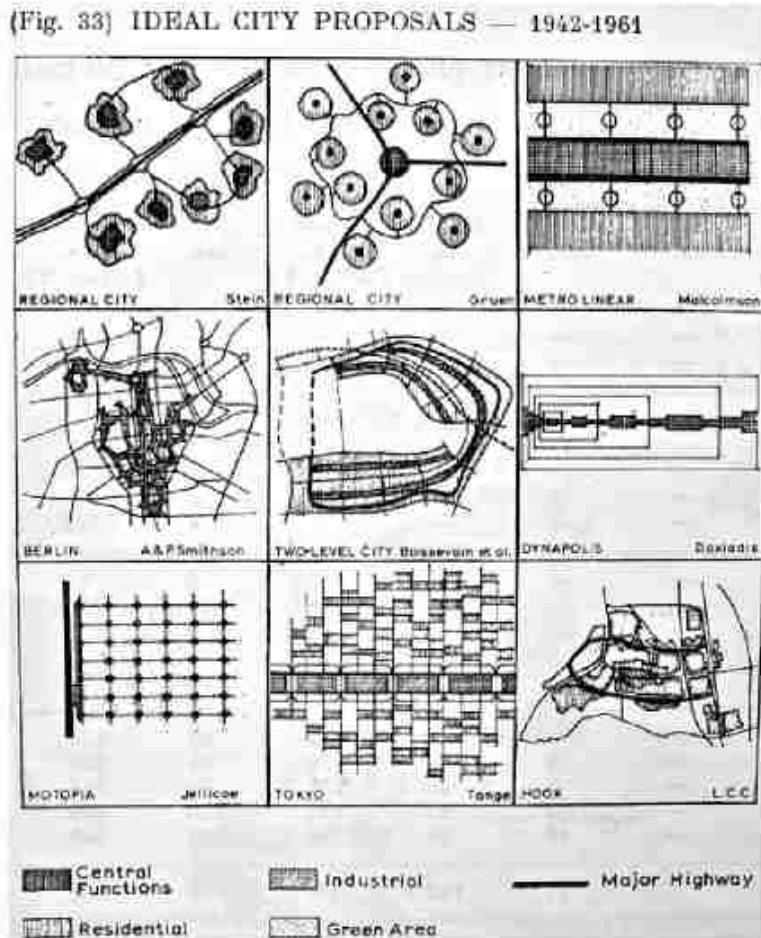

(Fig. 33) IDEAL CITY PROPOSALS — 1942-1961

Figure 30 Tyrwhitt's Contribution to the City of Future Project included in the 20th c. utopian plans that incorporated possibilities of Growth and Change.Courtesy Jaqueline Tyrwhitt by Ellen Shoshkes

She was interested in finding a pattern that supported growth and she felt that this conceptual sensing precedes the act of actual realization of design at the human scale while clarifying that 'cities in the former sense no longer existed'. Impressed by Kenzo Tange's mega-structural plan for Tokyo that relied on organization of the transportation system as the central idea, she reasoned in

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[73] Ibid. p204

favor of urban forms that emanated out of a lattice of transportation systems at the core of their design.

Figure 31 Tange Kenzo, A Plan for Tokyo 19601961. Photo: Kawasumi Akio. Photo courtesy: TANGE ASSOCIATES (Source : Domus,2011)

Her ideal city shape models received plenty of criticism mostly from those who took them too literally and that dampened immediate explorations. She further championed the vision that Ekistics was committed to providing arts with an equal footing in urban design and planning. She said[74] :

> "the growth and change of human settlements exhibited an obvious but unconscious integration" of economic, social, political, administrative, technical, and aesthetic factors. However with urbanization and industrialization urban planning in the Anglo American world had become "totally divorced from the disciplines related to art, and all attention has been concentrated upon the determination of social and economic goals and (more recently) the processes of decision making."

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[74] Ibid P.208

Progressively, Tyrwhitt was being identified in a small group of people that had shed 'timid' attitudes and forged ahead with boldness while being aware of the 'chancy business of being wrong'.[75] Aditya's search for sustainable urbanism resonated deeply with this view of ecological modernism. Tyrwhitt's influence on Prakash is strong, one that tries to integrate modernist rationality with natural systems. He created a framework with which to approach the urban design that worked for the entirety of the city and its people. Prakash stressed on the need for a 'good idea' and its vital importance, similar to Tyrwhitt's insistence on art in urban design. In his opinion, a good idea is one that enables fulfillment of the human spirit by providing an opportunity for intervention.[76]

> "Let there be a meeting of minds. But let there be a determind and concerted effort to give good ideas a chance, so that we may build a better India for our coming generations. In the very act of having a good idea, and implementing it, is a good life. Lack of good ideas and lack of will to act, is a sure road to degeneration.
>
> Where there is space for human activity, let architect give shape to that space, so that human spirit may find fulfillment in this life, and leave a better environment for generations to come."

One such intervention he imagined was in the existing building stock that was under-utilized, particularly in Chandigarh that propelled him to think of "utilization factor" and multi-use that he felt would at least double the utilization factor of most of the built volume of the city. These ideas were influenced by Buckminister Fuller, who Aditya admired. He further extends his criticism of town planner's view of slums in his paper *Chandigarh as I see it*.

> "...This leads me to another aspect of spaces, namely its utilization. It is abundantly noticeable that the space in a slum is most efficiently utilized. It can be said that the space here has cent percent utilization factor for there is no time of the day or night when each and every inch of space is not put to some use or other. Of this 'productive use" by which I mean use in a manner in which a commodity is transformed to a higher value, it would be in the region of 40% of the time. Remainder would be for relaxation, entertainment, religion, and games. On the other hand we find that the utilization of space in the 'planned' or 'formal' sector is the least

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[75] Ibid 212

[76] Aditya Prakash Archives – Architecture as a Profession

efficient. A very large chunk of space goes for parking of vehicles during the working hours of the day and this space is deadly ghostly during off hours. That is zero productivity. When you examine the use of the covered space which is well serviced with air conditioning…

…and many such activities. Masons, carpenters, plasterers, plumbers, electricians, and gardeners are drawn from such slums. All domestic helps, restaurant bearers, cooks, and petty salesmen come from slums. Not only do they fend for themselves but also find jobs, or vocations for their relations and fellow neighbours in their villages. They keep an eye on the emerging opportunities and exploit them as much as does a property dealer in the formal planned urban centre. There can be no doubt that slums serve a 'need' of the urban system as we have in India. They exemplify, the genius of our people for productivity and survival under the most trying circumstances. Yet they do not form part of the planning process. All planning is directed towards clearing the slums or relocating them somewhere out of sight. It is said that all schemes of rehabilitation fail because those who benefit from the schemes of rehabilitation fail because those who benefit from the schemes actually sell the houses they get and return to live in some other slum to reap another benefit…"

Moreover, his own view on urbanism keeps the issue of transport organization in the center and in his writing titled *Chandigarh Rickshaw* he observes how the car reigns supreme on an Indian road pushing the rickshaw and the pedestrians to the fringes. This was one of his repeating critcisms of Le Corbusier's planning of Chandigarh along with the concept of specialization of cities. Prakash felt that cities cannot be compartmentalized based on specialization learning from the 'destruction of the heart of the city of Ludhiana' due to the ever increasing pressure on it. He observed that its direction of concentric growth was not very different from that of the city of Delhi. Therefore he was in favor of decentralization as the only way to provide self-sustaining units that could be easily accessed by people from all walks of life.[77]

In Chandigarh's planning he identified the discontinuity where the built form was located in the middle of a parcel of land that ultimately ate the city. He was in favor of giving order to the city by formulating control measures regulating party walls and skyline at the stage of architectural drawings. In addition to that, he opined that a mindful rethinking of the landscape was critical as it was the element that held the city together. He was critical of the large patches of open fields that were under-utilized occupying prime land in the city. Instead he was in favor of greens that

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[77] Audio : Interview of Aditya Prakash

could run along the city providing the necessary balance and relief as it framed the architecture.[78]

These ideas came before he developed in full form his concept for self-sustaining cities where he viewed greens in a productive manner, intensely focusing on its strategic assimilation with the activities of the city. Aditya did not view architecture as merely a tool to solve the problems of living. He was convinced that architecture was the mother of all arts and therefore looking for art in architecture was a contradictory endeavor according to him.[79] This is where he found resonance in Ekistical thinking that was invested in synthesis as opposed to explication of concepts and hidden symbolism in (the act of) architecture.

SELF SUSTAINING CITY – LINEAR CITY CONCEPTS

In the face of the oil crisis of the early 1970s[80], Aditya was convinced that the dependence on oil as the primary source of energy was perilous, especially for the poor. In response, he decided to develop a city design concept that focused on reducing waste by recycling, relying on frugality, and thus reducing unbridled consumption. Aditya found the compartmentalization of human activity in the name of efficiency to be inefficient from the standpoint of sustainability. Taking cue from the cyclical processes of nature, he designed his prototype with an aim to conserve energy by reducing the burden on transportation. He thought of this concept as a mathematical model with universal applicability, aimed at providing for the self-sustaining settlements that would be immune to man-made scarcities. He integrated production of food and animal husbandry with housing and recreation based on his research on nutrition requirement - with a view of ensuring continuity of basic food supply in the settlement. He looked at waste generated from one activity as a potential fuel for another, thus tapping energy inter-relationships.[81] He argued that small scale industries and craftsmen must be incorporated into the urban plan, both to generate surplus and

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[78] Aditya Prakash Archives – Control for the Physical Pattern of the city
[79] Aditya Prakash Archives – Art in Architecture
[80] It was called the first oil shock when Arab Petroleum Exporting Countries proclaimed and embargo resulting in oil prices shooting upto four times. Its severity was felt worldwide impacting all facets of life.
[81] Aditya Prakash, *Towards a Self-Sustaining Settlement,* Ekistics 278.46(1979) P.305-313

in turn, benefit from it. He felt that a settlement must provide employment to everyone and not just to those who can afford it.

Backed by his research on villages, the Indian way of life and the conviction that fully integrated self-sustaining cities could be designed, he conceptualized his vision of a Linear City. The form he chose for the Linear City was influenced by Doxiadis' linear city, as manifested in Islamabad. Prakash's intention was also to contain unmanageable urban sprawls so he proposed this linear form which was made up of self-sustaining sectors that could be infinitely multiplied. He synthesized efficient management system with industry, commerce, housing and agriculture.

Prakash's linear city had a uniform grid created by the elevated road networks with blocks that make neighborhood sectors at ground level. Along one of the edges of the linear city ran the intercity road and rail network while along the other edge ran the greenbelt comprising of farmlands. Each sector was further subdivided into four equal residential zones – called zone B. Retail was at the center of the sector and the commercial was on the edge of the sector. With fast moving motorized traffic elevated on road above, the ground was reserved for trade and non-motorized rehri economy. The elevation of the road networks opened up the sectors for pedestrian passage, separating motorized from the non-motorized transport.

Besides building self-sustaining settlements, Prakash's principle concern was to find a way to integrate rural life alongside urbanization and industrialization. This was

Figure 32 Image of Islamabad, A growing dynametropolis. Source: A Global History of Architecture 2011
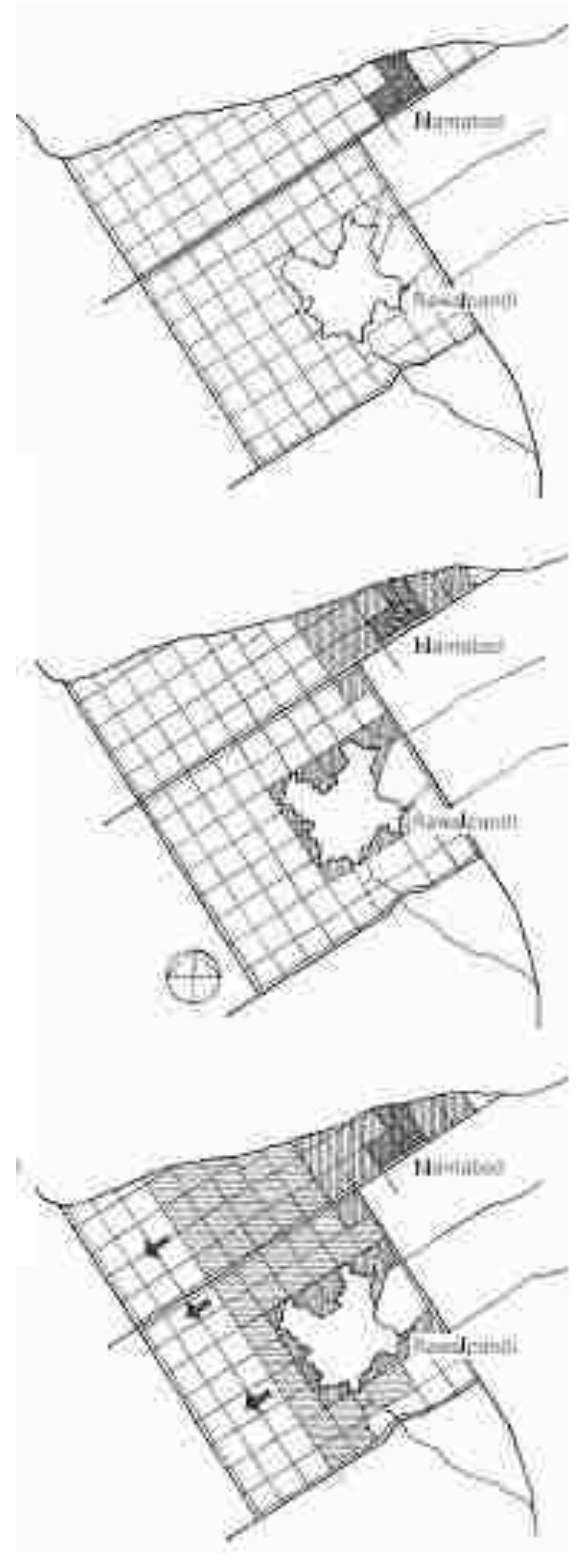
manifested in sectors that were formally and programmatically designed to hold production and recycling of food, minimizing waste while ensuring continuity in the supply of essential items. Rural agriculture was designed to live parallel to the linear city.

Aditya described his Linear City as an Open City Concept which was open to all - denying none. Unlike his fellow modernists who, well into the end of the end of the century, viewed the rural as a problem that needed to be managed, and that necessarily had a parasitic relationship to urban growth, Aditya Prakash was committed to finding an integrated design solution for rural and the urban, the formal and the informal.
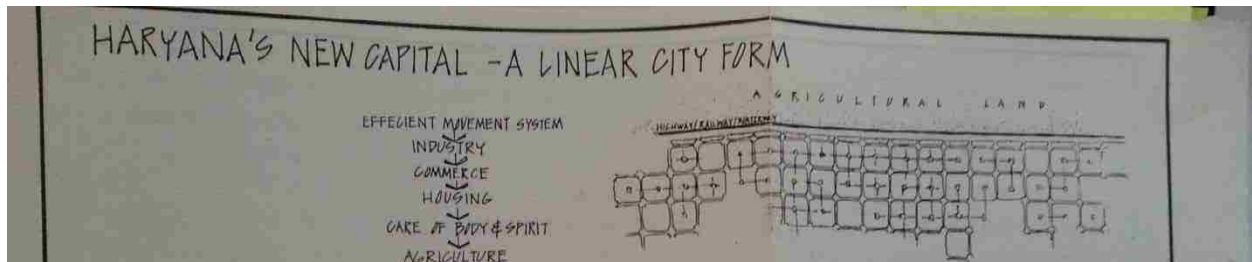

Figure 33 Schematic Sketch for the new capital of Haryana based on the Linear City Concept. Courtesy - Aditya Prakash Archives
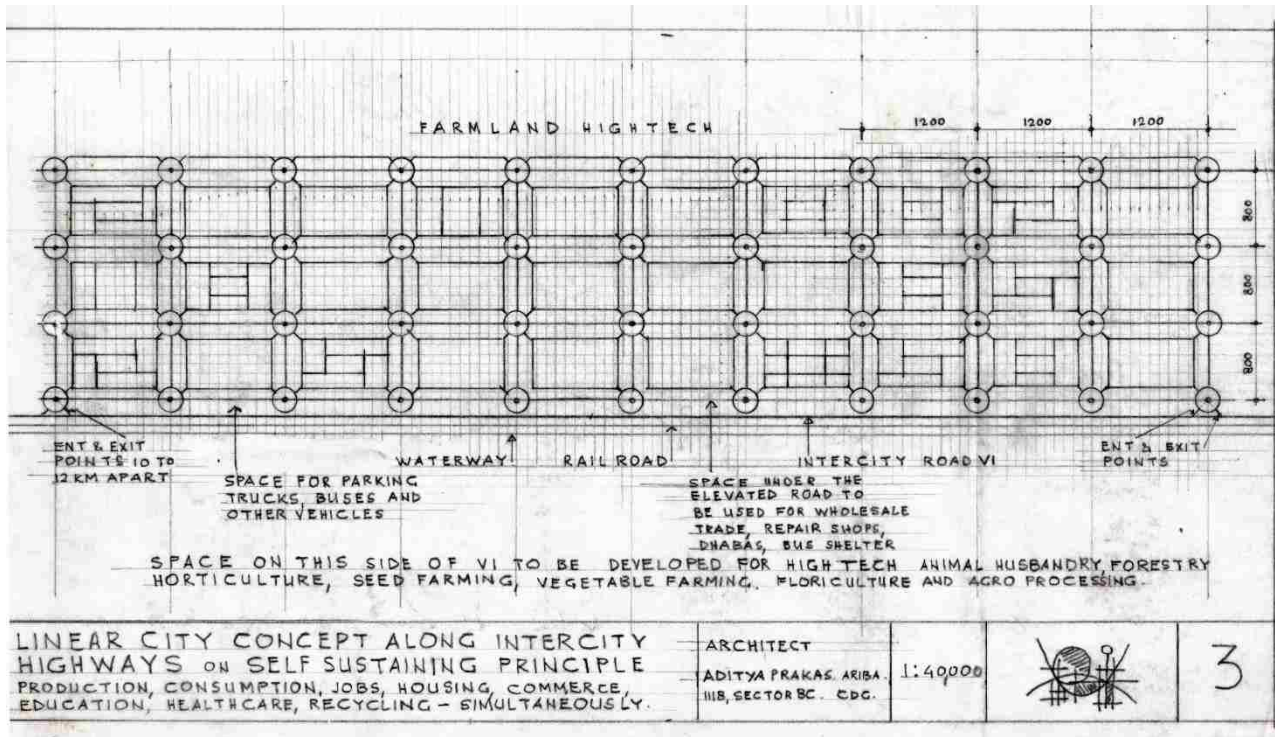

Figure 34 Drawing of the Linear city and its relationship to natural and transport systems. Image Courtesy Vikram Prakash
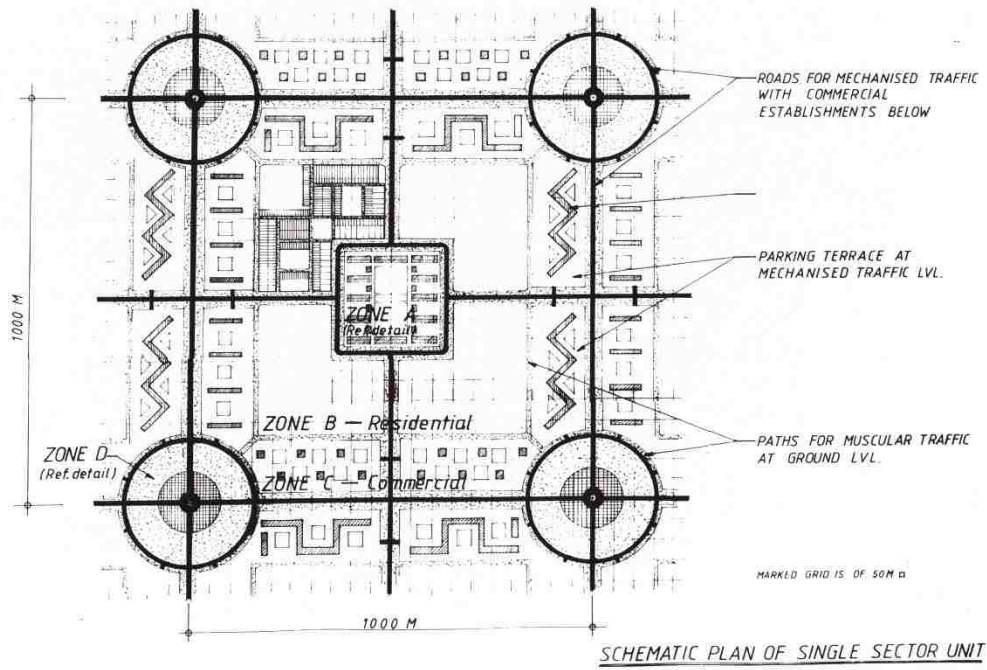
Labels on figure:
- ROADS FOR MECHANISED TRAFFIC WITH COMMERCIAL ESTABLISHMENTS BELOW
- PARKING TERRACE AT MECHANISED TRAFFIC LVL.
- PATHS FOR MUSCULAR TRAFFIC AT GROUND LVL.
- ZONE A (Ref. detail)
- ZONE B — Residential
- ZONE D (Ref. detail)
- ZONE C — Commercial
- 1000 M
- 1000 M
- MARKED GRID IS OF 50M □

SCHEMATIC PLAN OF SINGLE SECTOR UNIT

Figure 35 Image of the Schematic plan of the Single sector unit, Courtesy Vikram Prakash
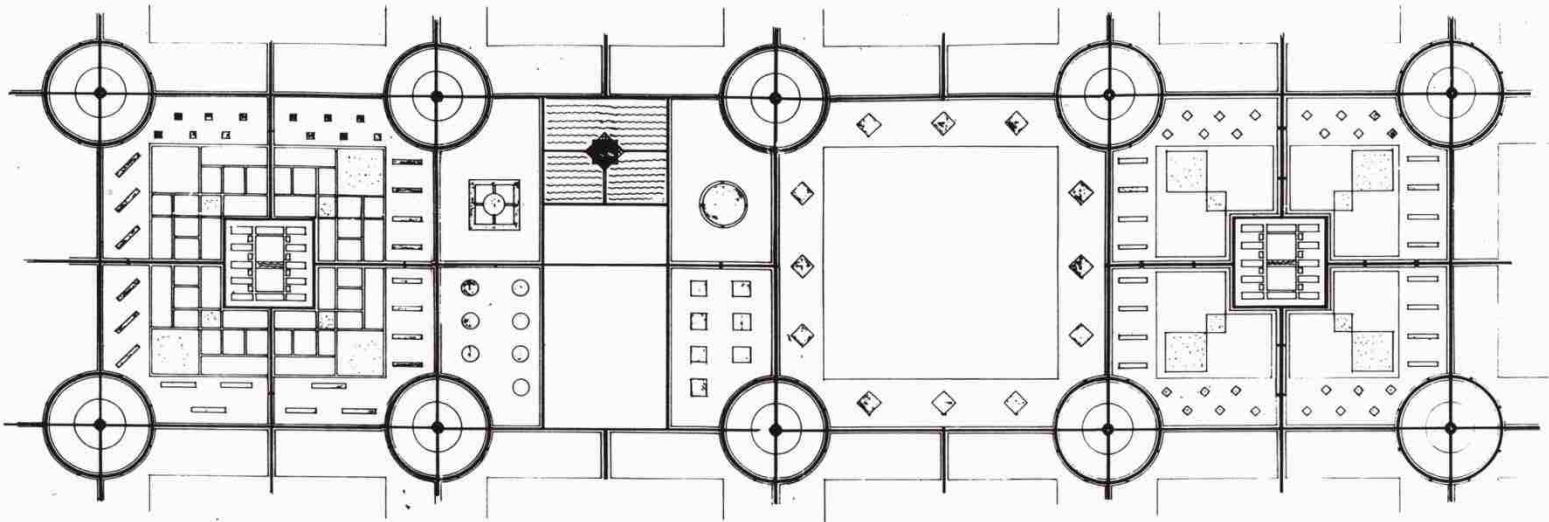
Figure 36 Drawing stacking the sectors in a linear grid. Courtesy Vikram Prakash

Figure 37 Details of Zone D and Zone A of the Linear City Model, Courtesy Vikram Prakash

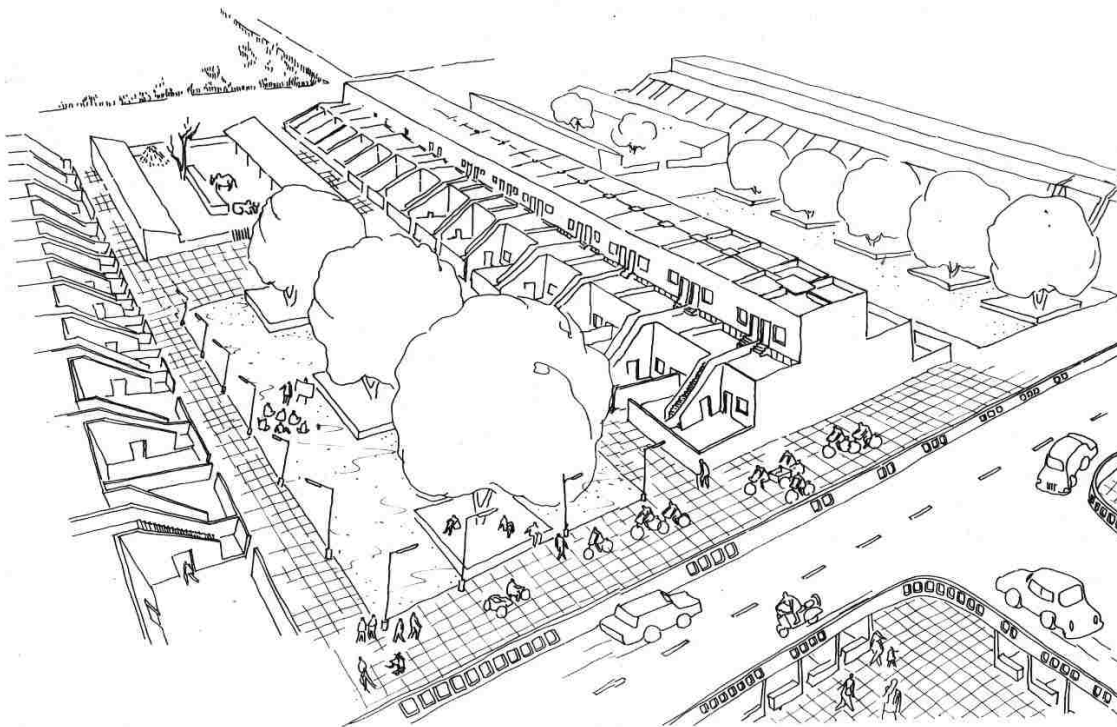*Figure 38 Sketch of the Detail of Zone D, courtesy Vikram Prakash*

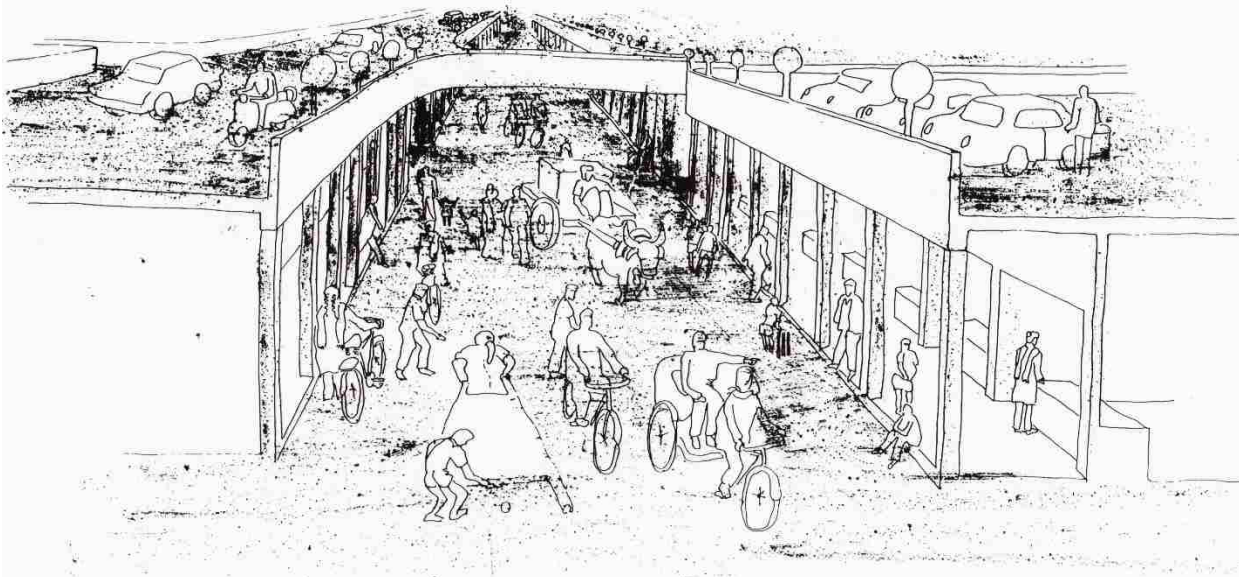*Figure 39 Sketch of Zone A, Courtesy Vikram Prakash*

Figure 40 Sketch By Aditya Prakash envisioning the Character of the Linear City at work, Image Courtesy Vikram Prakash

REFLECTIONS

While the quest for sustainable cities is the norm today, in the 1970s when Aditya Prakash developed his self-sustaining settlements concept, his ideas were well ahead of their times and considered beyond the pale of responsible urban design and planning. At a time when Indian architects were consumed by the desire to build national symbols, Aditya was invested in inventing an architectural form with the common man in mind. In his pursuit, he donned multiple roles of an architect, academic, painter, poet and theatre enthusiast to understand all the facets of the art of architecture. This pursuit assumed a greater priority for him instead of being a part of a powerful clique alone. *Sandeep Virmani*[82] said:

> He was a less understood man, his genius exposed to few. And perhaps he himself was responsible for this in many ways- he was awkward socially, reticent and inept at 'marketing'/communicating his ideas, which had a lot for the world to gain from.

He also diverged from his contemporaries who viewed the slums as necessarily a threat to the planned city – citing that 'they do not contribute to the city's revenue, but suck away the wealth disproportionately in all conceivable ills that one can think of, such as juvenile delinquency, death crimes, accidents etc.'[83] For Prakash the slum and the urban informality was an inseparable part of the city that was neglected by planners, even created by them. His work struggled to break

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[82] Response prepared By Sandeep Virmani as Part of the interview.
[83] Kanvinde, Achyut. "ACHYUT KANVINDE I welcome you all to this session. The participants for this session are Sir Denys Lasdun, William JR Curtis and Peter Smithson." *Celebrating Chandigarh* (2002):56

the strict binary image of the rural and the urban and viewed them as enmeshed interconnections.

- He learnt from the Chandigarh project the value of planning, as much as he learnt of the threats - of imposing a utopian concept like the segregated planning of the garden city concept blindly without being tuned to the real world context. This empathetic approach did not view the urban poor as a nuisance but as an asset.[84]

- He trusted his personal observations from Ludhiana that further reinforced his faith in architectural design and accounted for the informal sector in his work by pursuing the study of the 'organic' world of informality.

- The example of segregating vehicular traffic – responds to the problem of decongestion while liberating the pedestrians and non-motorized vehicles of the perils of competition on Indian roads.

- He was concerned with what architectural expertise meant to him: it was a tool of constant learning and unlearning. He did not concern himself with stylistically modelling after Le Corbusier nor did Prakash borrow his romanticized view of the common man. Although, he inherited the Corbusian worldview he questioned it rigorously at a time when most Indian architects were spoilt in 'the fault line of *guruvada*.'[85] He employed keen discernment in what he learnt from his lineage and that reflected in his built response beyond explorations and essays in concrete that the architects were obsessed with at the time. This reflected in the harmonious merging of form and function and its honest communication.

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[84] *Chandigarh a Presentation in free verse* brims with the enthusiasm he felt for the new city of Chandigarh while later on in his paper, *The Mobile shops* one could see him repeating and re-presenting the desires of the *rehriwalah* or the 'common man'. His writings reveal him feeling into their plight, their lives and their aspirations viewing them as central to the city life.

[85] Spivak, "*City, Country, Agency*" p3

- He was quick to respond to the alarm the oil crisis posed for the future, especially for the poor man in India. He was far-sighted and trusted his instinct for speculative knowledge over immediate trends that was striking of his futuristic mindset.

- In his settlement design, he used his learning of the unit being the basis from which the whole design emerges to conceptualize self-sustaining modules as sectors. This is again an example of applying what he learnt of design at the Corbusier School, to serve his own vision of the common man.

- He incorporated Tyrwhitt's ecological modernism synthesizing an architectural response for the same. Along with being invested in the subaltern project he was open and active participant in the transnational exchange of Knowledge.

- He learnt from the scientific worldview- the rigor of empirical research and data, and not sentimental sympathy alone in knowing more of the condition of the poor while formulating his ideas for both *rehri* design and self-sustaining settlements.

- He did not consider nutrition and animal husbandry as outside the realm of design. He incorporated them in his scheme with the intention of not marginalizing other professions but he was alive to the interdisciplinary nature of design synthesis.

- Each time Prakash met a change in direction in his career he embraced it with openness and a singular focus of serving the common man. Although his initial writings are marked with a faith in a definite solution to a problem, towards the end of his career he was skeptical of the very same stability.[86]

In conclusion I would like to mention what a contemporary of Prakash, Charles Correa thought about Le Corbusier's engagement in Chandigarh. He opined that Le Corbusier was primarily concerned with completing his oeuvre but his deepest instincts were European.[87] In my opinion, it

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[86] As reflected in his thoughts on stability as constant motion.
[87] Panicker, Shaji K. "'Indian Architecture'and the Production of a Postcolonial Discourse: A Study of Architecture+ Design (1984-1992)." PhD diss., University of Adelaide, 2008.p315

would be fair to say that a western training did not subdue Prakash's instincts that were Indian. He did not turn to the iconic architecture of the past, nor did he particularly look to the west for answers; even when he did, he did not use a hoodwinking strategy in selling them as adapted "Indianess". He was resolute in expending his energy as an expert on the garbage dump.[88] It is significant then to underscore that expertise in itself is not discriminating but how it is chosen to be used qualifies it as such.

It can of course be argued that all of Aditya Prakash's ideas have been authoritative - in the sense that they wish to possess the total understanding of reality, employing the rigor of expertise to render them veritable. He had little investment in our contemporary tropes of participative planning and design. By the same token, his ideas pushed the boundaries of disciplinary and bureaucratic concerns to think about a design for India and not an Indian design. As India moves into a new era of liberalization and globalization (particularly with the results of the recent election) the fate of the urban poor and the rural hangs in balance. In this context, Aditya Prakash's concepts ask questions of urbanization and deruralization that are still relevant.

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[88] Spivak, Gayatri Chakravorty. "City, Country, Agency." *Theatres of Decolonization:(Architecture) Agency (Urbanism), Chandigarh, India* (1995).

*Figure 41 Image of free verses **Stability is Constant Movement** by Aditya Prakash.*