

Institute of Design Environment and Architecture - Architecture Department

Course Content Semester 8

Theory Module 8

Urban History:

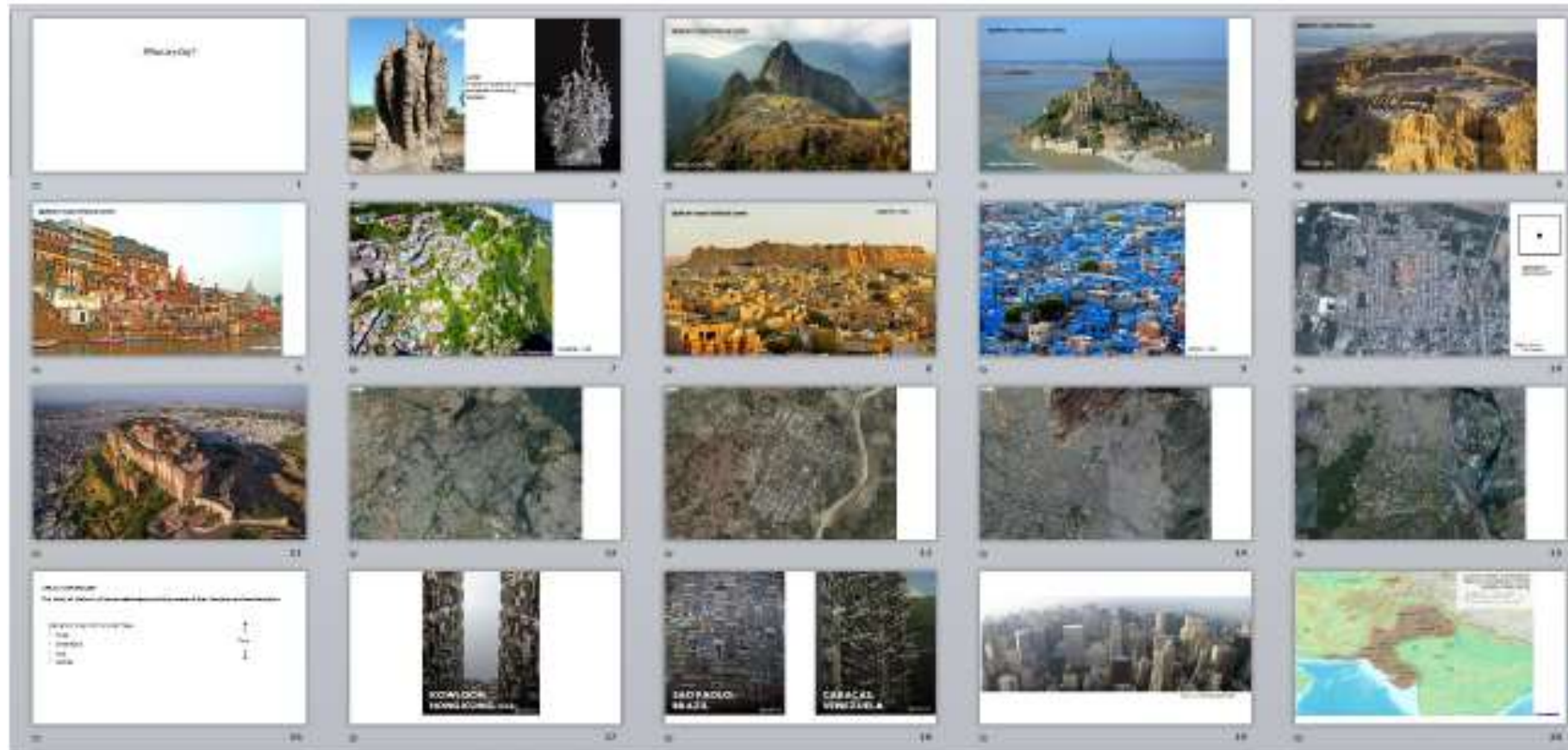
Understanding cities and its physical and cultural context is integral part of the architectural studies. The theory of semester 8 look into urban history. The studies include:

- History of early cities
- The art of building human settlements into Historic cities, Temple cities and today's urban situations
- Introduction and association of urban theories
- Urban projects, city design— scale, impact and reach
- Urban design terminologies

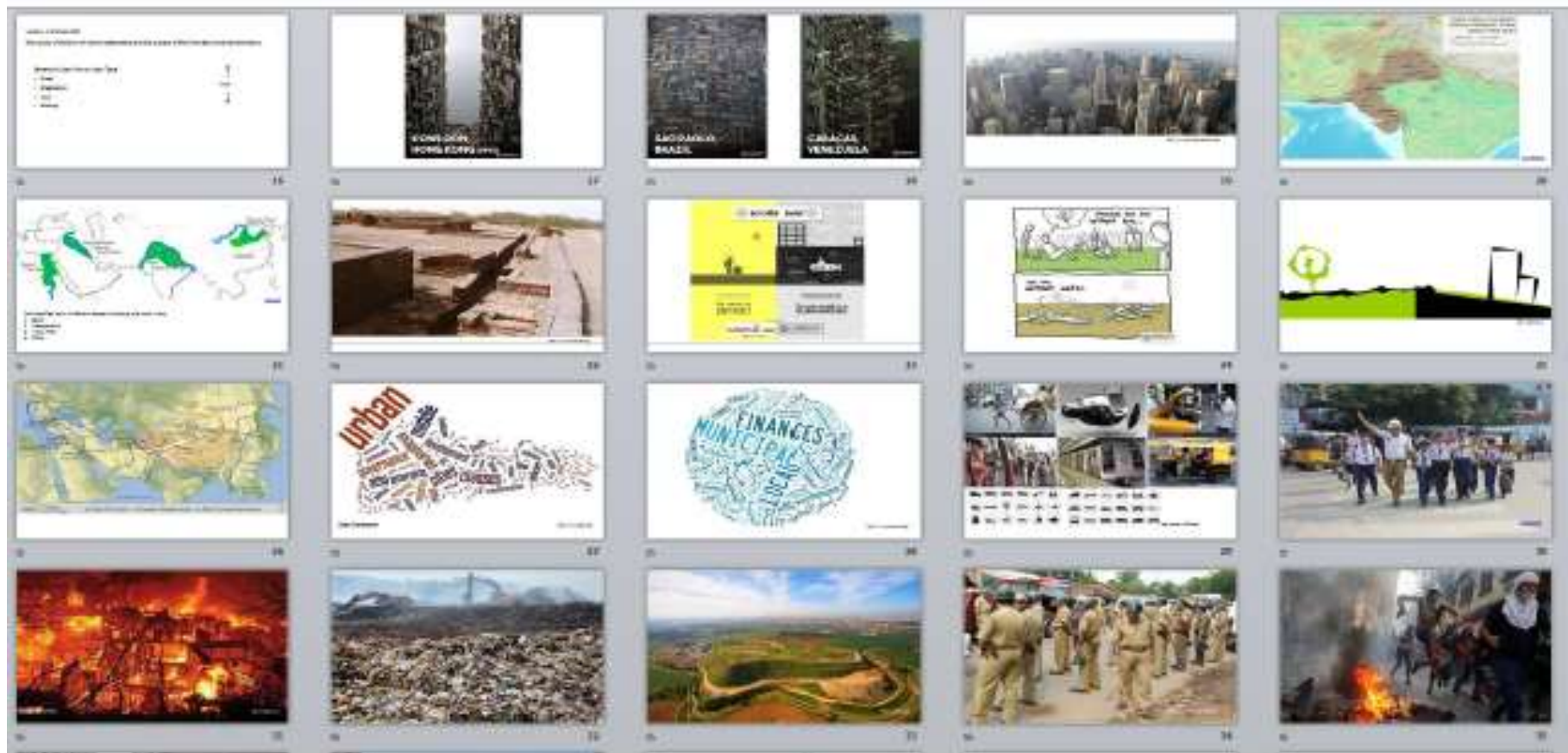
Studying the theories and context of urban situations (field conditions) acknowledging the capacity of new interventions hence establishing understanding towards symbiotic relationships within the cities. Students will have a deeper understanding about old cities and will have better insight for making urban interventions based upon developed theoretical understanding of urban/peri urban situations.

- The focus of the module will look into various urban theories- Traditional and contemporary.
- During the course discussions are brought about the structures of the city, theories behind it.

Presentations





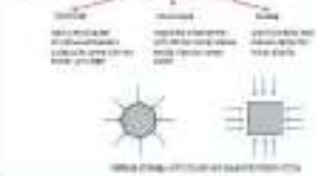










Presentations




Presentations



Presentations

<p>Theory Module -08 Urban History Lecture 01</p>	<p>Great Sites The River - Human Age The River - Human Age The River - Human Age</p> 	 <p>Diagram illustrating the relationship between the river and the city, showing the river as a central axis and the city as a cluster of buildings along the riverbank.</p>	 <p>Map showing the distribution of urban settlements across Europe, highlighting the concentration of cities in the western and central regions.</p>	 <p>Map showing the distribution of urban settlements across Europe, highlighting the concentration of cities in the western and central regions.</p>
<p>Roman Cities Ancient Rome</p>	<p>Roman Cities Urban Form Urban Form Urban Form</p> 	<p>Roman Cities Urban Form Urban Form Urban Form</p> 	 <p>Photograph of a Roman building, likely a temple or public structure, featuring a prominent thatched roof and a large, open courtyard.</p>	<p>Roman Cities Urban Form Urban Form Urban Form</p> 
				


Presentations




20


21




22



23




24




25


26




27




28




29




30




31




32



33

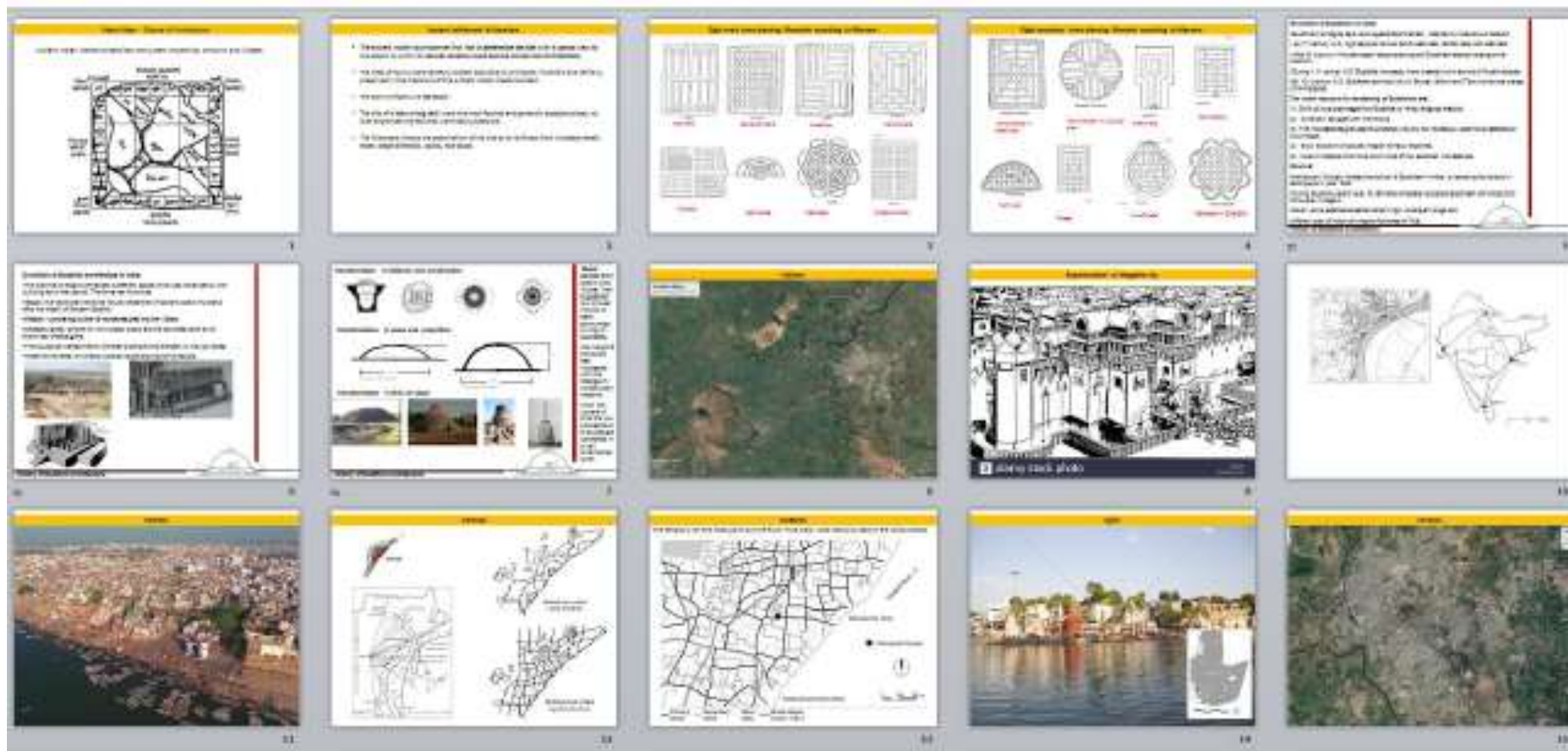


34

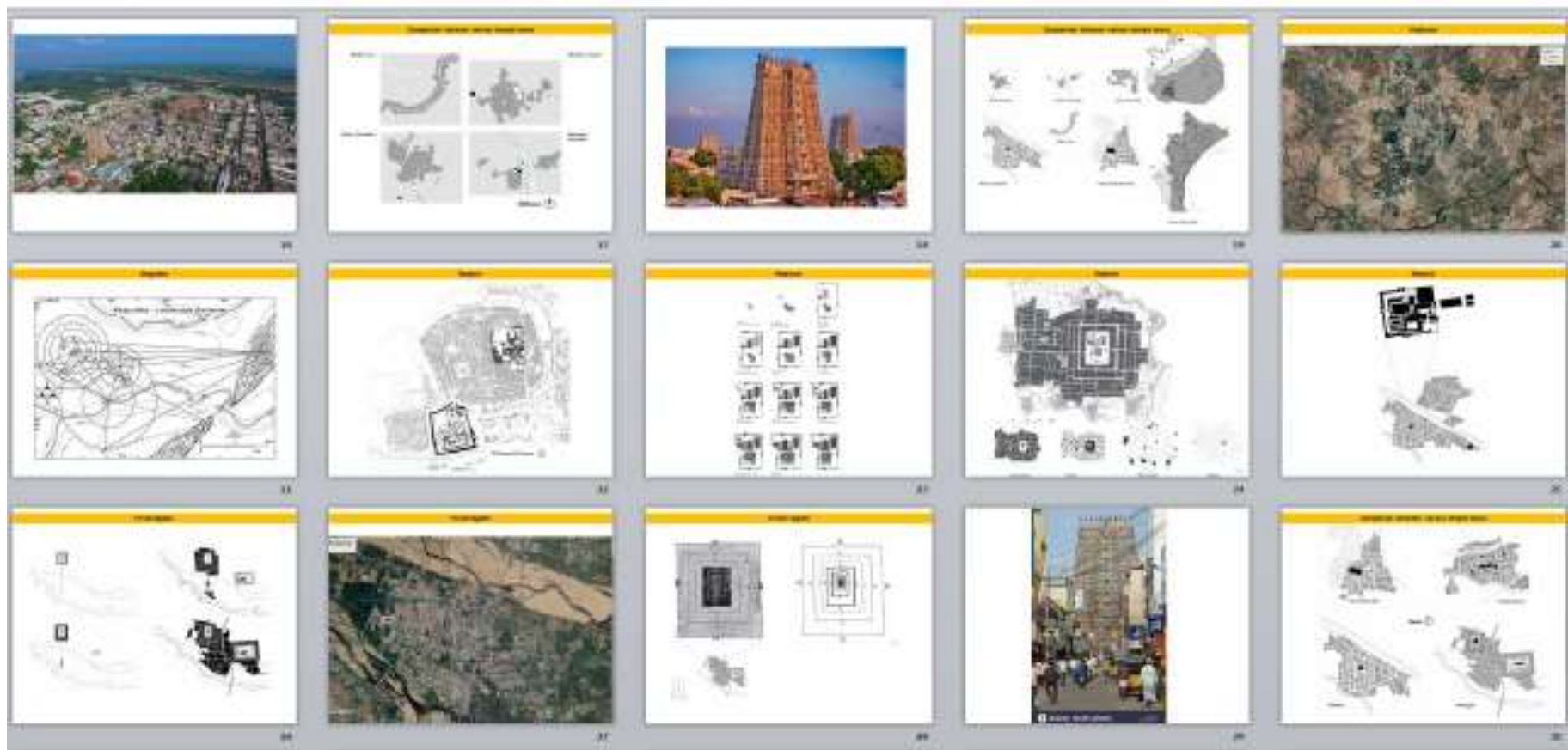


35

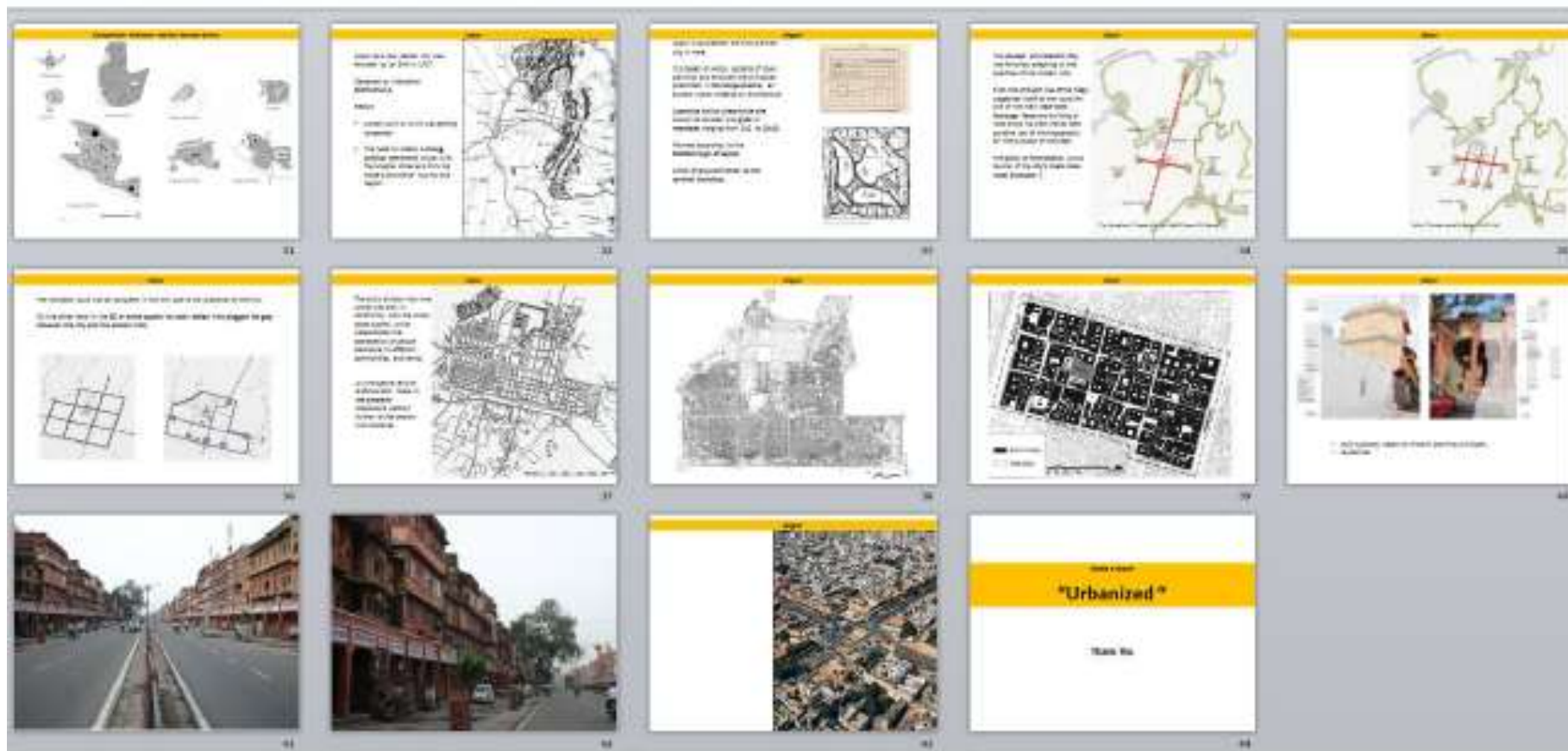
Presentations



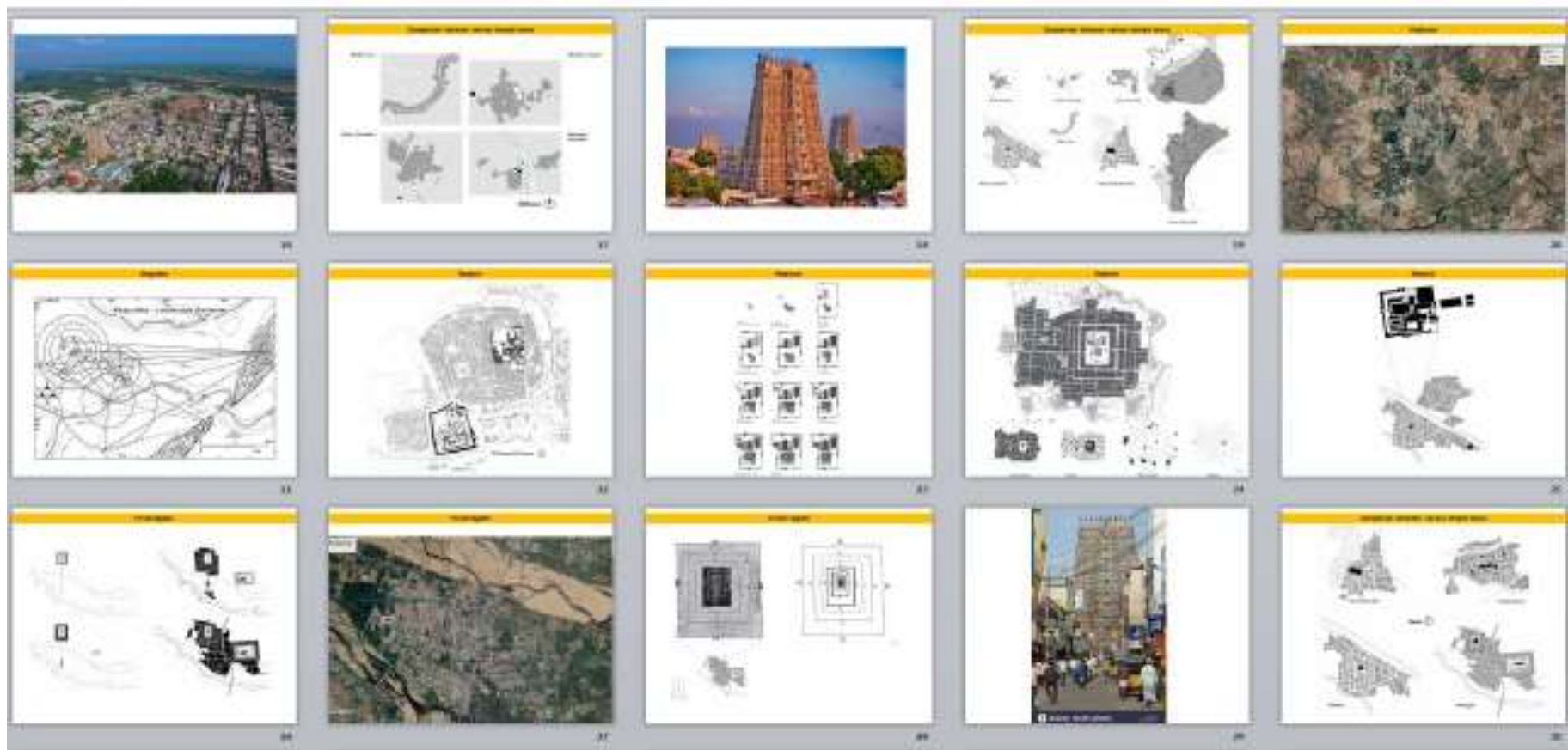
Presentations



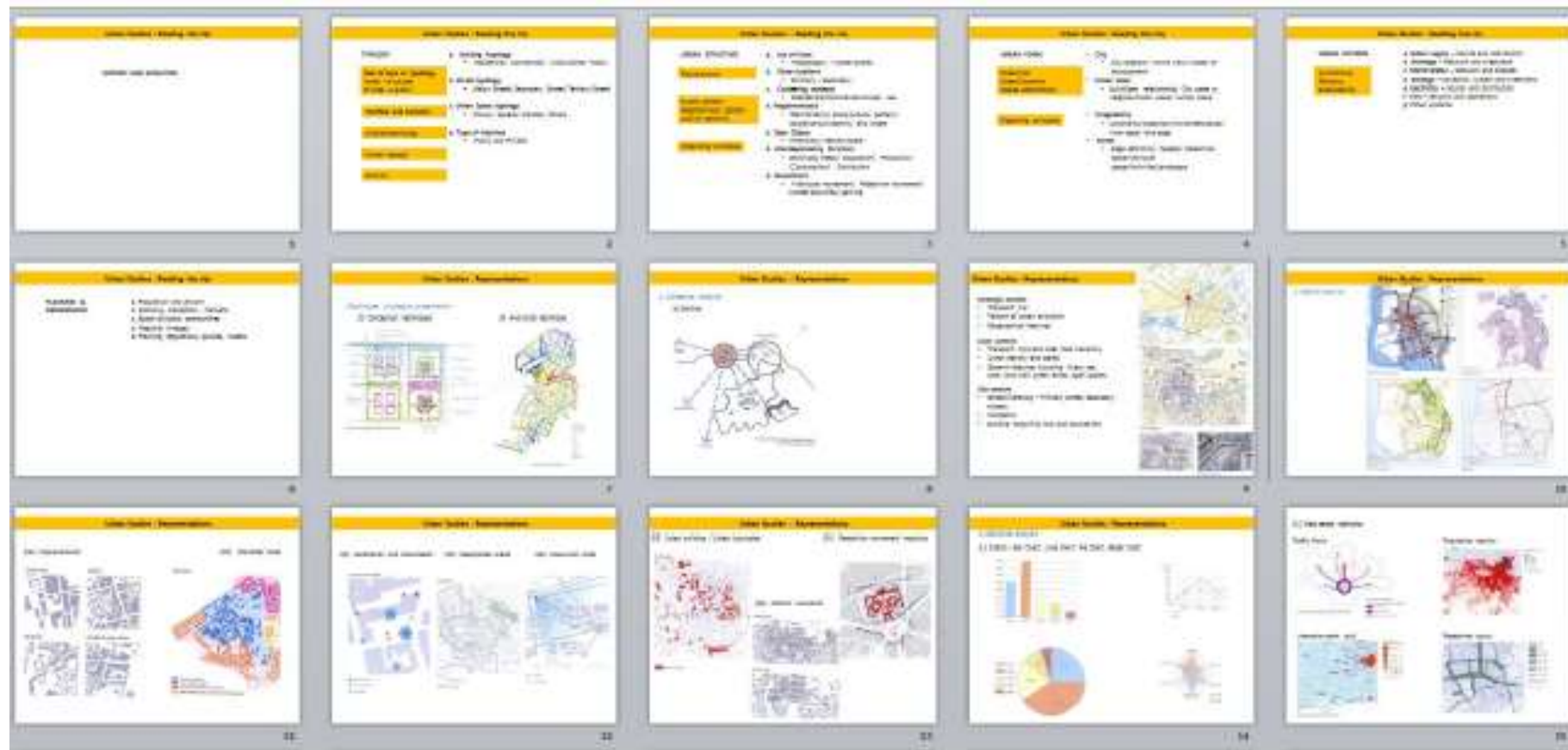
Presentations



Presentations



Presentations



Presentations



THE INDUSTRIAL REVOLUTION

Robert Owen, Thomas Malthus, Charles Darwin



THE INDUSTRIAL REVOLUTION




THE INDUSTRIAL REVOLUTION




THE INDUSTRIAL REVOLUTION




THE INDUSTRIAL REVOLUTION




THE INDUSTRIAL REVOLUTION

Robert Owen, Thomas Malthus, Charles Darwin



THE INDUSTRIAL REVOLUTION




THE INDUSTRIAL REVOLUTION




THE INDUSTRIAL REVOLUTION




THE INDUSTRIAL REVOLUTION




THE INDUSTRIAL REVOLUTION

Robert Owen, Thomas Malthus, Charles Darwin



THE INDUSTRIAL REVOLUTION






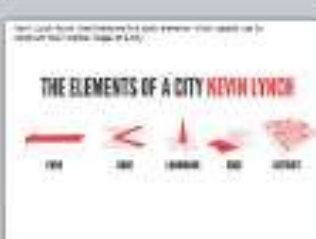
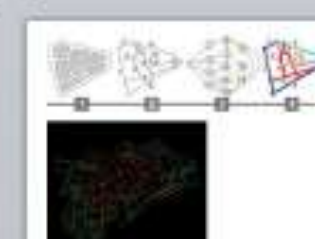









THE INDUSTRIAL REVOLUTION




THE INDUSTRIAL REVOLUTION

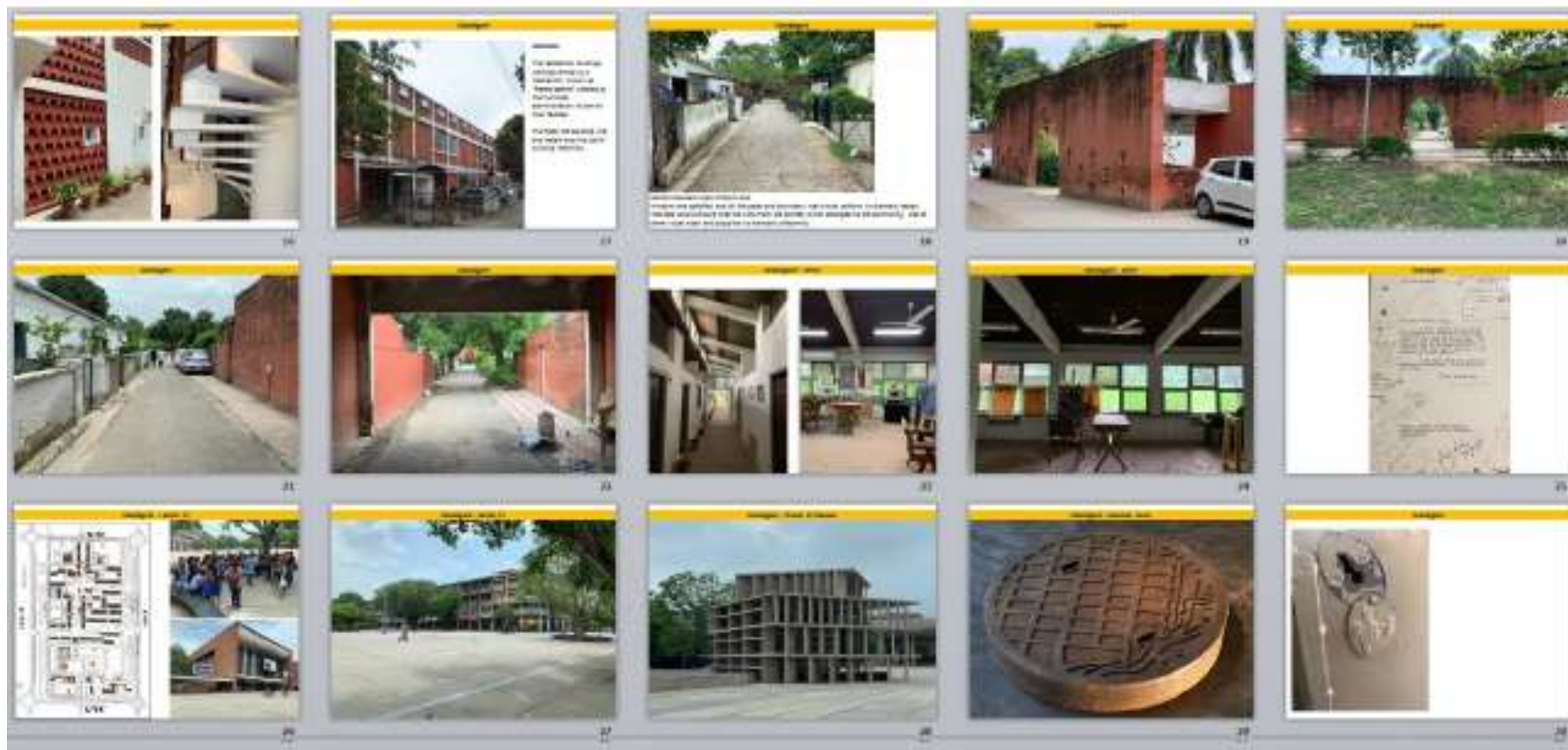
Presentations

 <p>21</p>	 <p>22</p>	 <p>23</p>	 <p>24</p>	 <p>25</p>
 <p>26</p>	 <p>27</p>	 <p>28</p>	 <p>29</p>	 <p>30</p>
 <p>31</p>	 <p>32</p>	 <p>33</p>	 <p>34</p>	 <p>35</p>

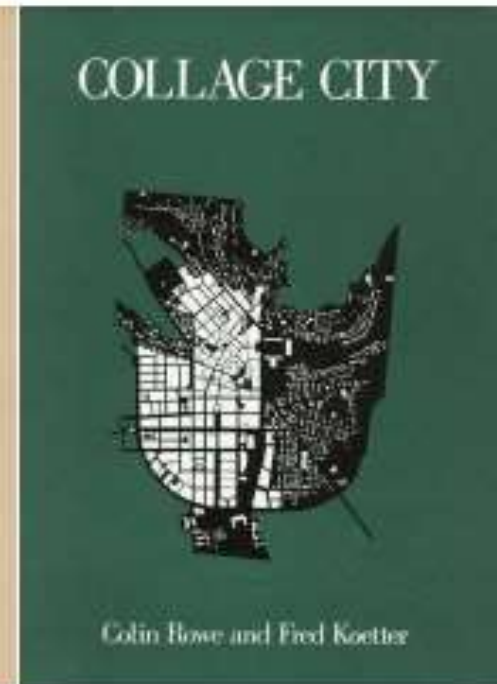
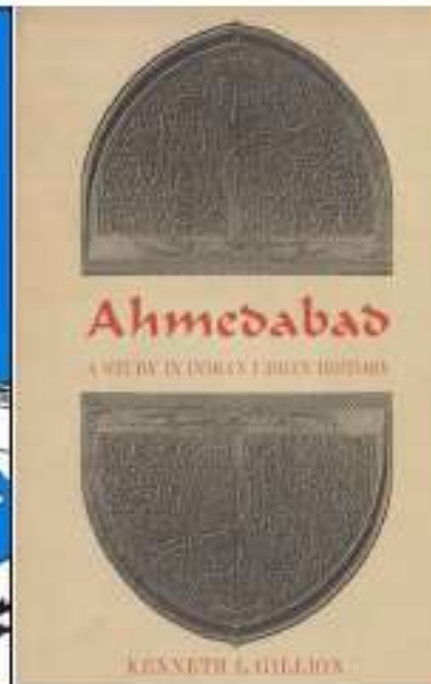
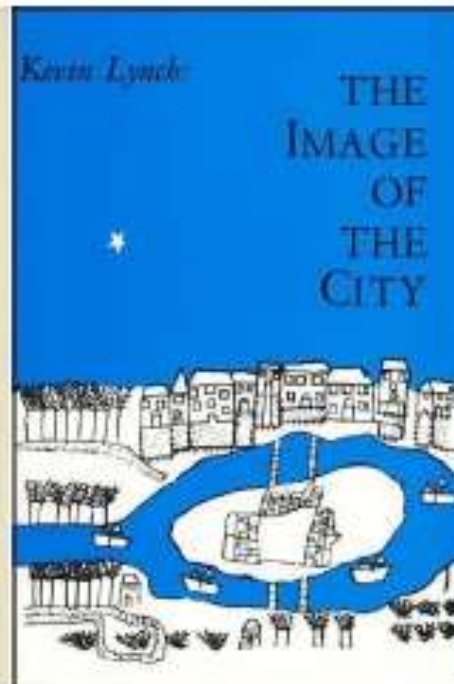
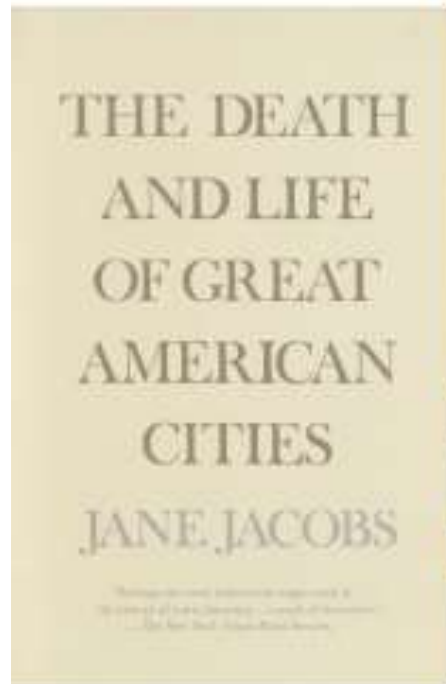
Presentations



Presentations



Reading - Books



DOCUMENTS

NOTES ON AHMEDABAD

Professor Patrick Geddes

On a recent visit of some days in November last, I was able to acquaint myself with the city in comparative detail. The question of the demolition of the walls was then put to me, both by the Collector, and by the then acting Municipal Commissioner, Mr. Mehta. I devoted considerable time and attention to the walls accordingly, throughout their entire course. On a more recent and briefer visit (4th-6th April 1905), I have again gone over them, and their neighbourhood, section by section.

The dispute before us is one which has frequently occurred in Europe, during the latter nineteenth century especially; and with more frequent, though not inevitable recourse to the attack. The defenders are usually romantic, sometimes direct-

ly of the school of Sir Walter Scott (and in this connection it is worth remembering that the restoration of these very walls of Ahmedabad took place in 1872). Sometimes indirectly, by way of his disciples, as through the Oxford movement of 1847, through Ruskin, Morris, Viollet-le-Duc or Sir Gilbert Scott; and the later medievalist restorers; or finally from the archaeologists, who are still essentially romantic, however clothed by a too Germanic science. Similarly the attackers are for the most part directly of the school of Haussmann in Paris or of one or other of his successors, Dr. Schöber of Berlin for choice. To name a few examples of the best work of each school, we owe to the first the preservation of the walls of Carcassonne, of York or Nuremberg,

while to the latter are due the Ring of Vienna, the garden boulevards of Wurzburg, and of Rheims. Each side has thus its successes to appeal to, and is not easily moved by the arguments of the other, for a profound difference of temperament and sentiment divides them: for while the first is fervently romantic, the second is apt to be cynically contemptuous of all romanticism, and finds its aesthetic satisfaction in later and more conventionally modern ways.

Intermediate types there are also, partaking of the character of each school: appreciating for instance this or that historic triumph of architecture, now religious, like the Ahmedabad mosque, now domestic, like the richly carved old house-fronts of the pob, or again delighting in the military sternness of bastions and walls, or the varied individuality of gates, and even seeking, often not without appreciable success, to revive one or other of these forms for modern uses. Such in fact have been the fashions of architects, and hence the contemporary struggle and rivalry of styles, of which modern Bombay is but the most conspicuous of Indian examples.

Amid this babel of specialist opinions, what is a Government to do? To pigeon-hole and postpone is one familiar method; to throw aside all specialist reports and to act on its own responsibility is another. But to postpone is to conserve; while to decide is victory for the one party or the other; for to one of these, unconsciously if not consciously, every member of every Government must incline, having in course of its particular administrative experience, taken in more of one view than of the other.

What then is to be done?

SPUR

Grand Reduction: 10 Diagrams That Changed City Planning | SPUR



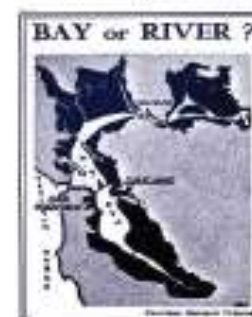
IDEAS AND ACTION FOR A BETTER CITY
a member-owned and nonprofit organization

ARTICLE

Investment | Table of Contents

Grand Reductions: 10 Diagrams That Changed City Planning

Many ideas that have most influenced the shape of our cities have been expressed through simple diagrams that have become iconic illustrations of values, policy agendas and ideologies.



"Having indulged in the same world of image-making that artists and advertisers do, some of these images are at once analytical diagrams and artful, even mesmerizing, images. It pleased me to call most often for city images: it is still imagery, with all of the complicated and rich implications of that term. Every plan is an act of persuasion, an argument for an alternative way of life that attempts to posit or convince an audience of that alternative." —Andrew Scharoun

Figure 1: The "Bay or River?" diagram helped galvanize support for Save the Bay in the 1980s. Courtesy of The Oakland Tribune.

Many of the ideas that have most influenced the shape of cities have been expressed through diagrams — simple visual statements that distill particular values, ideologies and policy agendas. A few have become iconic images, inspiring criticism, elaboration and debate. They all had in common is the visual success of ideas planning and design.

This issue of *The Urbanist* and the accompanying exhibition at the SPUR Urban Center jointly investigate the geography of city planning and its impact — for better or worse — on the shape of cities. As we look back at the world's most influential diagrams, asking not only what planners were thinking about cities but also how they used the power of imagery to persuade and to communicate.

To planners, many of the images in this illustrated book are instantly recognizable. Others may feel more distant, even perhaps strangely familiar, when because they've been widely reproduced or because of the familiar places they've shaped and inspired.

Consider New York City's 1786 *DuRoi's Plan*. Some planning geeks may know its original. But others, like those who've seen Hugh Ferriss' vivid renderings of its impact on a theoretical site or Fritz Lang's imaginary city below the 1927 film *Metropolis*. But surely everyone will recognize the Chrysler and Empire State buildings and the unmistakable form of mid-century modernism that the plan generated.

Similarly, the knowledge and action grid created by the 1788 *Land Ordinance* (see p. 2) may seem like a bit of arcane Federal Land Office history — and one connects it to the map of the Midwest from an airplane window, with its perfect nine-mile-by-nine-mile grid subdivided into square farm plots with pre-arranged circles. It's at night with Chicago, Las Vegas or Phoenix, and the implications of this simple diagram on urban form become really apparent.

What is a Diagram?

The word "diagram" (literally "marked out by lines" in Greek) refers to any schematic visual representation of an idea. Diagrams take advantage of the difference between how our minds process language and how they process images. They are often put alongside a written statement to highlight a particularly important idea.

Charts, graphs and maps are all diagrams, and their job is to explain — of lines, words and shapes, often mixed with language — ideas from the abstract to the concrete, in drawings and photographs.

Diagrams seem to have a special power when it comes to the representation of place, since they are able to combine spatial and temporal ideas. Pictures and data that are integrated with abstract ideas and concrete proposals. In this way, the diagram becomes a remarkably versatile species which to explain the shaping of cities.

What Does a Diagram Do?

The power of a diagram is relative to the complexity of the idea it is trying to explain. A simple and powerful visual statement — its clarity results from simplicity as much as inclusion, so it is often achieved at the expense of nuance and specificity. Unsurpassed by geographic concerns, diagrams allow for experimentation and imaginative leaps.

www.spur.org/publications/related-articles/10-diagrams-that-changed-city-planning

100

Chapter 2

from *The City of Tomorrow and its Planning*

Le Corbusier

XI. A Contemporary City

The use of technical analysis and architectural synthesis enabled me to draw up my scheme for a contemporary city of three million inhabitants. The result of my work was shown in November 1922 at the Salon d'Automne in Paris. It was greeted with a sort of stupeor; the shock of surprise caused rage in some quarters and enthusiasm in others. The solution I put forward was a rough one and completely uncompromising. There were no notes to accompany the plans, and, alas! not everybody can read a plan. I should have had to be constantly on the spot in order to reply to the fundamental questions which spring from the very depths of human feelings. Such questions are of profound interest and cannot remain unanswered. When at a later date it became necessary that this book should be written, a book in which I could formulate the new principles of Town Planning, I resolutely decided first of all to find answers to these fundamental questions. I have used two kinds of argument: first, those essentially human ones which start from the mind or the heart or the physiology of our sensations as a basis; secondly, historical and statistical arguments. Thus I could keep in touch with what is fundamental and at the same time be master of the environment in which all this takes place.

In this way I hope I shall have been able to help my reader to take a number of steps by means of which he can reach a sure and certain position. So that when I unroll my plans I can have the happy assurance that his astonishment will no longer be stupefaction nor his fears mere panic.

A contemporary city of three million inhabitants

Proceeding in the manner of the investigator in his laboratory, I have avoided all special cases, and all that may be accidental, and I have assumed an ideal site to begin with. My object was not to overcome the existing state of things, but by constructing a theoretically water-tight formula to arrive at the fundamental principles of modern town planning. Such fundamental principles, if they are genuine, can serve as the skeleton of any system of modern town planning; being as it were the rules according to which development will take place. We shall then be in a position to take a special case, no matter what whether it be Paris, London, Berlin, New York or some small town. Then, as a result of what we have learnt, we can take control and decide in what direction the forthcoming battle is to be waged. For the desire to rebuild any great city in a modern way is to engage in a formidable battle. Can you

imagine people engaging in a battle without knowing their objectives? Yet that is exactly what is happening. The authorities are compelled to do something, so they give the police white sleeves or set them on horseback, they invent sound signals and light signals, they propose to put bridges over streets or moving pavements under the streets; more garden cities are suggested, or it is decided to suppress the tramways, and so on. And these decisions are reached in a sort of frantic haste in order, as it were, to hold a wild beast at bay. That BEAST is the great city. It is infinitely more powerful than all these devices. And it is just beginning to walk. What will tomorrow bring forth to cope with it?

We must have some rules of conduct.

We must have fundamental principles for modern town planning.

Site

A level site is the ideal site. In all those places where traffic becomes over-intensified the level site gives a chance of a natural solution to the problem. Where there is less traffic, differences in level matter less.

The river flows far away from the city. The river is a kind of liquid railway, a goods station and a sorting house. In a decent house the servants' stairs do not go through the drawing-room – even if the maid is charming (or if the little boats delight the loiterer leaning on a bridge).

Population

This consists of the citizens proper; of suburban dwellers; and of those of a mixed kind.

(a) Citizens are of the city: those who work and live in it.

(b) Suburban dwellers are those who work in the outer industrial zone and who do not come into the city: they live in garden cities.

(c) The mixed sort are those who work in the business parts of the city but bring up their families in garden cities.

To classify these divisions (and so make possible the transmutation of these recognized types) is to attack the most important problem in town planning, for such a classification would define the areas to be allotted to these three sections and the delimitation of their boundaries. This would enable us to formulate and resolve the following problems:

1. The City, as a business and residential centre.
2. The Industrial City in relation to the Garden Cities (i.e. the question of transport).
3. The Garden Cities and the daily transport of the workers.

Our first requirement will be an organ that is compact, rapid, lively and concentrated: this is the City with its well-organized centre. Our second requirement will be another organ, supple, extensive and elastic: this is the Garden City on the periphery.

Lying between these two organs, we must require the legal establishment of the absolute necessity, a protective zone which allows of extension, a reserved zone of woods and fields, a fresh-air reserve.

Density of population

The more dense the population of a city is the less are the distances that have to be covered. The moral, therefore, is that we must increase the density of the centres of our cities, where business affairs are carried on.

Lungs

Work in our modern world becomes more intensified day by day, and its demands affect our nervous system in a way that grows more and more dangerous. Modern toil demands quiet and fresh air, not stale air.

The towns of today can only increase in density at the expense of the open spaces which are the lungs of a city.

We must increase the open spaces and diminish the distances to be covered.

Assignments

[Search jobs](#)
[Sign in](#)
[Search](#)

[international edition](#)

[Home](#)
[Sport](#)
[Culture](#)
[Lifestyle](#)
[More](#)

Story of cities #12: Haussmann rips up Paris - and divides France to this day

Georg Haussmann's massive urban renewal in Paris transformed the French capital with an ambitious programme of urban planning. For over 150 years, his legacy is still felt across the city and the world. Why?

12/10/2019

Story of cities #32: Jane Jacobs v Robert Moses, battle of New York's urban titans

When the planning titan Robert Moses imposed a road through Greenwich Village in 1955, he ran opposition from one particularly feisty local resident, Jane Jacobs. It was the start of a decades-long struggle for the soul of New York.

12/10/2019

Story of cities #11: the reclamation of Mumbai - from the sea, and its people?

Transforming Mumbai's swampy land into land fit for a city was a daunting challenge. It was one of the world's most ambitious - but also the most controversial - urban challenges of the 20th century. How did it happen?

12/10/2019

Story of cities #31: Skopje plans for the future by fixating on its ancient past

Macedonia's capital has rebuilt after the only earthquake in its history. It has also built a new identity, one that fixates on its ancient past. How did it happen?

12/10/2019

Story of cities #10: how the dirty Old Town became enlightened Edinburgh

Edinburgh's capital, once a dirty and dangerous place, played by social reformers and local elites. Then a young, visionary architect came up with a plan for Edinburgh New Town - and it became the greatest period in the city's history.

12/10/2019

Story of cities #30: how this Amsterdam inventor gave bike-sharing to the world

In the 1960s, a Dutch engineer devised the 'velo-taxi' plan to reduce the risk of pollution and cars. The inventor has since revolutionised public transport all over the world - so why has cycle-sharing not taken off in the UK?

12/10/2019

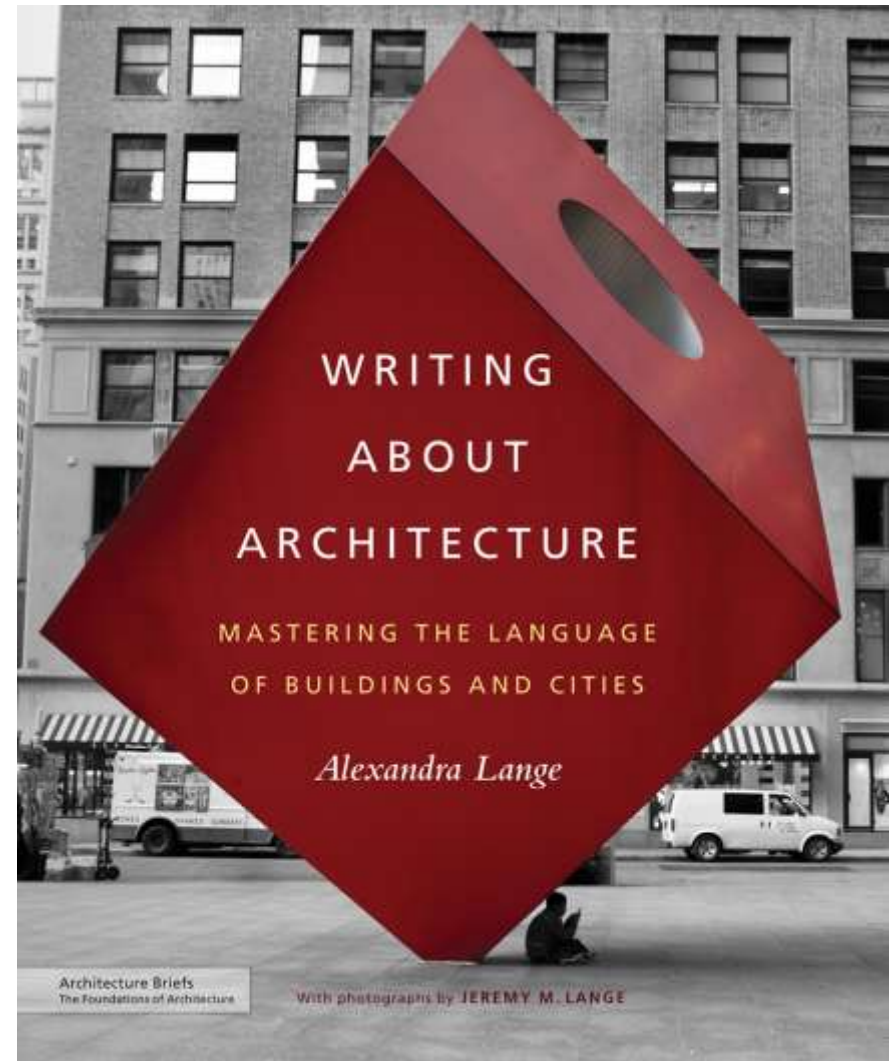
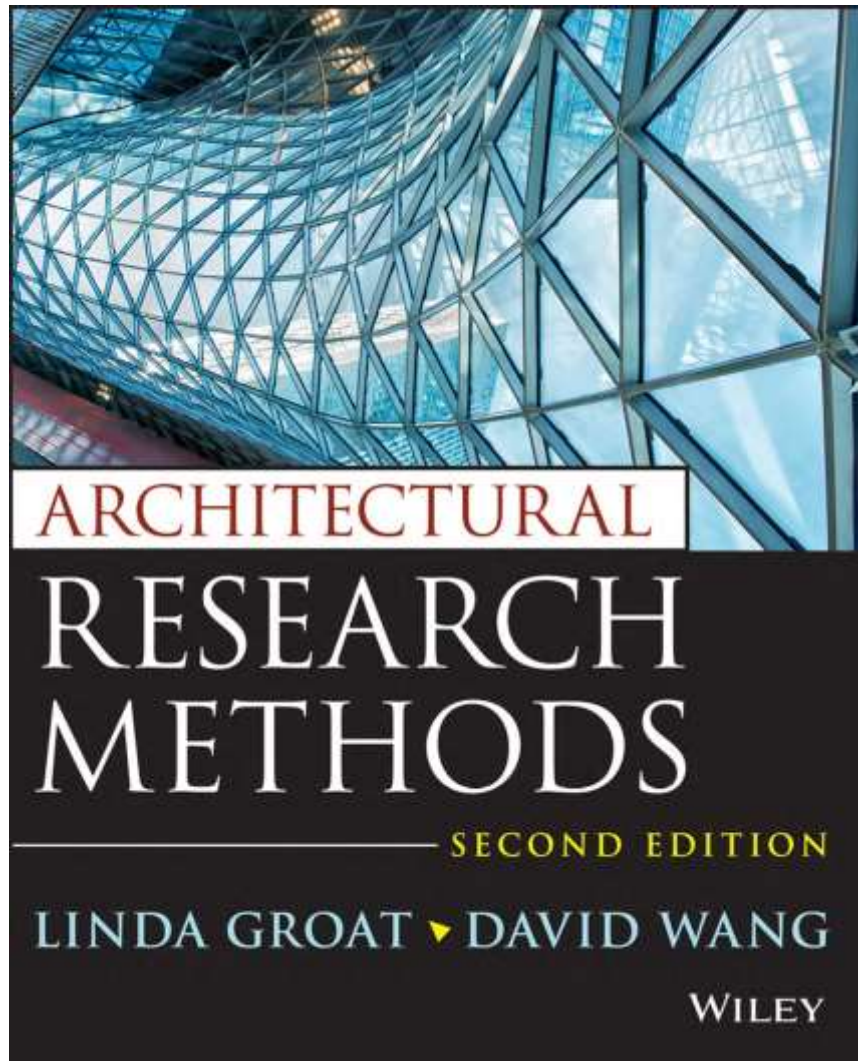
Assignment 01: - Every city has different story to say- these stories include- philosophy, politics, demography, urban renewal, urban transformation, urban conservation, art, painting, resistance, antiquity and so on. Please write concise 500 -600 words on the story of city you chose. You must write this in word format. With your name on top and word count at the end. The entire series – “Story of Cities” is remarkable reading. It was an attempt to introduce you to new city that you might have not visited or known about. Please try to trace the story of the city with various maps and photographs. When you come across certain terminology – research about it and catch the relevance.

Research Methodology:

Types of Research- Academia and Applied Research

- Approaches taken are Quantitative and qualitative
- What is research and what guides it?
- Data sets required to ponder over for a research
 - Primary- The set of information that in person you have collected
 - Secondary- Intensive data research done by externally or external factors
 - Tertiary- Look for alternatives which exhibit the same phenomenon and study their developments.
- Methods to analyse the data
 - Locating the touch points.
 - Identifying the rational data
 - Converting assumptions to hypotheses
 - References and their applied means
 - Insights.

Reading Material



THE
SEVEN LAMPS
OF
ARCHITECTURE

JOHN RUSKIN
INTRODUCTION BY ANDREW SAINT

CENTURY
LONDON MELBOURNE AUCKLAND JOHANNESBURG

JUHANI PALLASMAA
(University of Helsinki)
**SPACE, PLACE AND ATMOSPHERE.
EMOTION AND PERIPHERAL PERCEPTION
IN ARCHITECTURAL EXPERIENCE**

The richest experiences happen long before the soul takes notice.
And when we begin to open our eyes to the visible,
we have already been supporters of the invisible for a long time.¹
Gabriele D'Annunzio

Fusion of the world and the mind

The quality of a space or place is not merely a visual perceptual quality as it is usually assumed. The judgement of environmental character is a complex multi-sensory fusion of countless factors which are immediately and synthetically grasped as an overall atmosphere, ambience, feeling or mood. «I enter a building, see a room, and – in the fraction of a second – have this feeling about it», Peter Zumthor, one of the architects who have acknowledged the importance of architectural atmospheres, confesses². John Dewey, the visionary American philosopher (1859-1952), who already eight decades ago grasped the immediate, embodied, emotive, and subconscious essence of experience, articulates the nature of this existential encounter followingly:

the total overwhelming impression comes first, perhaps in a seizure by a sudden glory of the landscape, or by the effect upon us of entrance into a cathedral when dim light, incense, stained glass and majestic proportions fuse in one indistinguishable whole. We say with truth that a painting strikes us. There is an impact that precedes all definite recognition of what it is about.³

¹ G. D'Annunzio, *Contemplazioni della morte*, Milano, Franchi Treves, 1912, pp. 17-18. As quoted in G. Bachelard, *Water and dreams: an essay on the imagination of matter*, Dallas, The Pegasus Foundation, 1963, p. 16.

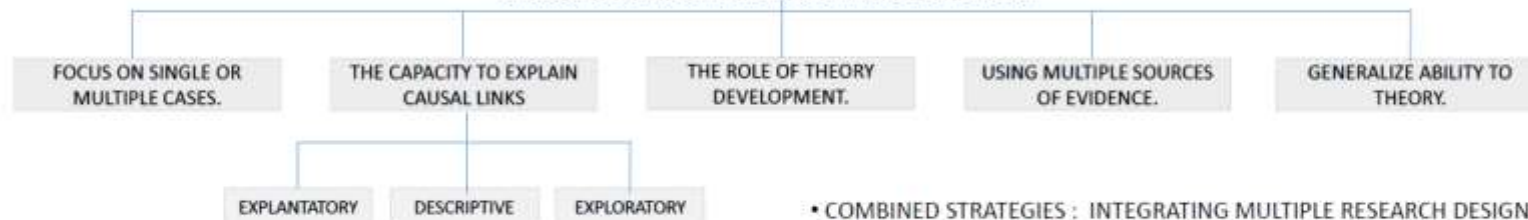
² P. Zumthor, *Atmosphere – Architectural environments – Surrounding objects*, Basel – Boston – Berlin, Birkhäuser, 2006, p. 13.

³ J. Dewey, *Art as experience*, 1934 (1987), as quoted in M. Johnson, *The meaning of the body: aesthetics of human understanding*, Chicago – London, The University of Chicago Press, 2007, p. 75.

Research Methods Strategies

CASE STUDIES AND COMBINED STRATEGIES

GENERAL CHARACTERISTICS OF THE CASE STUDY



EXAMPLE- There are two cases based to study of modernism.

- 1) Jane Jacon's study on modernism is based to theory that explains both explanatory and exploratory.
- 2) Fernando Lara's study on modernism has research question which is explanatory while there are more than one case for comparative study data which is more descriptive and explorative.

• COMBINED STRATEGIES : INTEGRATING MULTIPLE RESEARCH DESIGNS

- 1) Two Phase design
Two phase design involves two strategies in a sequence of distinctive phase.
- 2) Dominant - Less Dominant Design
Insertion of one type of research design within the framework of distinctly different research design.
- 3) Mixed – Methodology Design
It represents the most complete level of integration among two or more research designs, each having equal degree of emphasis.

STRATEGY : SINGLE OR MULTIPLE CASES



- 1) Multiple Case Study : The public realm in college town
Two college towns built in 19th century and two college towns built in mid 20th century are compared in terms of public space and each pair comes up with similar results by the principle of replication.
- 2) Multiple Case Study : LCA of office building
Three building with replicating features are compared and it results in common energy consumption, global warming potential and ozone depletion.

• STRENGTHS AND WEAKNESS

STRENGTH	WEAKNESS
Capacity to explain causal links	"Causality" likely to have multiple aspects and is complex.
Richness of multiple data sources	Challenge of integrating many data sources in coherent way
Ability to generalize to theory	Replication required in other cases

• STRENGTHS AND WEAKNESS OF STRATEGIES

MODEL OF COMBINATION	STRENGTHS	WEAKNESS
Two-phase	Each strategy can be presented fully.	Potential lack of connection
Dominant – less dominant	Potential for maintaining coherence through emphasis on dominant design	Strengths of less dominant design not fully realized.
Mixed Methodologies	Potential to maximize strengths and minimize weaknesses of each design	Need for level of sophistication in multiple research design

CORRELATIONAL RESEARCH

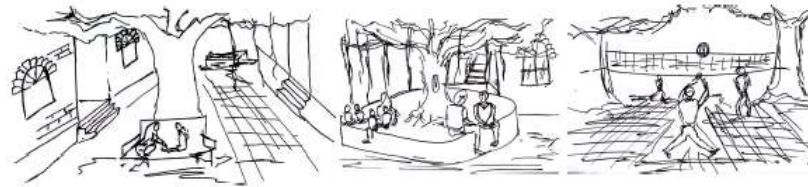
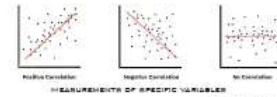
06 April 2020

Correlational research describes and measures the degree of relationship between two or more variables, and measures without manipulation of any variable, to determine whether there is a relationship.

STRATEGY OF CORRELATIONAL RESEARCH

Pattern of relationships between two & more variables, according to the factor. A focus on naturally occurring pattern to the measurements of specific variables. The use of statistics to clarify pattern of relationship.

- A focus on naturally occurring pattern.
- Measurements of specific variables.
- Categorical measurements.
- Ordinal scales.
- Interval & ratio scales.
- The use of statistics to clarify patterns of relationship



THE USE OF SPACE AND RELATIONSHIP FORMATION THROUGH CATEGORIZED ACTIVITIES

STRATEGY : TWO TYPES OF CORRELATIONAL RESEARCH

Relationship

- Community attachments
- Pedestrian
- Social interaction
- Community identity

Casual comparative

- Comparable people & comparable environment isolate the probable
- relevant factors by revealing causes for significant differences in the variables with measured variables.

PRIVATE — SEMI-PRIVATE — PUBLIC



CONNECTION OF SEMI-PRIVATE SPACE TO PUBLIC SPACE

TACTICS: COLLECTING DATA

Data collection & analysis used in correlational research. Issues relevant to edge of outset.

- Analysing context & collecting data.
- Observation techniques to do qualitative research to relate the correlational research in terms of design.
- In the design, the reader can pursue the relevant topic on which the design is relying, from entry to the circulation.
- Sampling: It is the consideration to be addressed according to the data collection to the design.

SURVEYS:

Surveys research is an essential equivalent correlational research.

SURVEY IS A TOOL TO GATHER BROAD

COLLECTION OF DATA IN DETAIL & GETTING MORE INFORMATION

Consideration in design:

1. Concept
2. Response formats
3. Clarity in phrasing the questions
4. Question orders
5. Instructions
6. Ethics

OBSERVATIONS

Various forms of observations represent frequently used set of tactics for data collection.

1. Categorization of actions & discourse.
 2. Access the juries requires the agreement of the participants involved.
- Sampling: It is the consideration to be addressed according to the data collection to the design.

Experimental and Quasi- Experimental Research

07/04/2020

Experimental Research

- Experimental research is so frequently portrayed as the standard against all other research methods.

- Researchers who believe in postpositives (person with hope) system – believe it as the best method
- Researchers who believe in subjective (choice depends on other factors than denotation) positions – Do not like it.

Diagramming Experimental Research Designs:

R= Random assignment
X= Experimental treatment
O= Observation of dependent variables

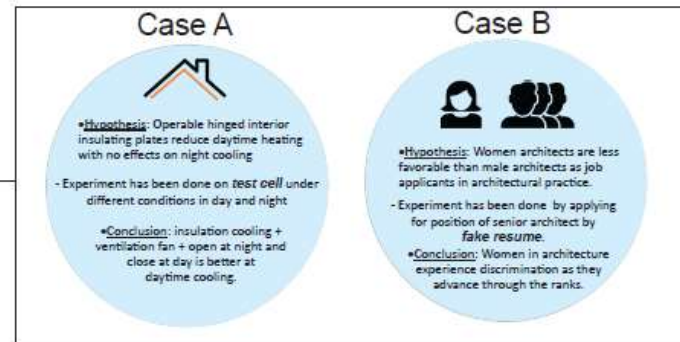
X1 O = Treatment 1 and its observation

R X1 O (Random assignment, followed by treatment 1, its observation)

O O X O O (Two observations in existing condition, Treatment, followed by two observations)

Characteristics of Experimental Research:

1. Use of treatment/ Independent Variable;
2. Measurement of outcome/ Dependent Variable;
3. clear unit of assignment (to the treatment);
4. The use of comparison or control group;
5. Focus on causality;



Case A	Case B	
Several conditions	Impact of gender	TO STUDY THE IMPACT ON INDIVIDUAL VARIABLE
Temperature readings	A questionnaire	VARIABLES THAT LEADS TO CONCLUSION
Test cell	Individual architects	ON WHICH EXPERIMENT HAPPENS
Insulation panels (control group)	Different treatments (comparison group)	THE WHOLE THAT AFFECTS RESULTS
Controlled due to laboratory settings	people were hired for the particular research only	AN EXTENT TO GET RESULT

Difference between Experimental and Quasi (Partly) experimental research:
A goal of both types – To achieve comparability among units in treatment groups.

Experimental

Comparability is established through 'random' assignments.

It is important to pick up random variables so that the variables are not always equivalent. Random assignment is the most effective way to ensure comparability of treatment groups.

For case A: Comparability is based on materials of same physical specifications

For case B: Resumes of specific type were created, they would be assigned randomly to the people

Quasi experimental

People or physical variables are not randomly selected. The researcher tries to catch as many variables as possible in this case.

Eg. To study the effect of four lightning systems on employee productivity in four separate office areas, employees couldn't be randomly picked from different offices as it would affect the work of respective offices. So in this case four existing work groups are selected with similar factors.

Applications of Experimental Research in Practice and Education:

Design decision - relies on a foundation of extensive experimental research.
- The case with issues such as building skin design and materials development.

The development of this range - higher level of building performance criteria.

Conclusions: Strengths and weaknesses

"To experiment means to actively change (x) and observe the response (y)."

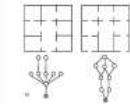
Issues faced

1. Efficacy and accuracy - Real life settings are too complex
2. Misapplication of Experimental procedure – Generalizing the study by experimentation only on certain people, ignoring the differences may give distorted results which may not be true for everyone.
3. Ethical issues – The people included in the experiment are not considered as a part of the observation / conclusion. They are termed as "subjects" in powerless positions. Treatments are applied to them without their consultation.

Logical argumentation identifies principles as the common denominators ties them together into a conceptual system that can:

DESCRIBE EXPLAIN PREDICT

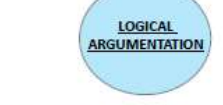
EXAMPLE:



The floor plans on the left are reduced to the generic maps on the right. These maps are able to reveal patterns of spatial adjacencies.

Attempts to place a well documented thing within a systematic framework that explains the thing and entails the framing of broad explanatory theories.

LOGICAL ARGUMENTATION



The general pattern is:

All mammals are animals.
All cats are mammals.
Therefore
All cats are animals.

EXAMPLE:

All B are C.
All A are B.
Therefore
All A are C.



Stewart Brand's So "It" Site, Structure, Site, Service, Space Plan, and Staff.

For each layer, the rate of change over time increases from the immobile site, which now changes, to the staff in the interior that shifts around daily.

STRATEGIC TRAITS

Paradigmatic Innovation

Tends to take a set of previously unknown and/or unexplained factors, and interconnect them into unified frameworks.

A priori argumentation

Once a priori first principles are identified, any empirical instance is only verification of those principles. eg. In Cartesian's Five Points of a New Architecture, supports, rooflines, free play, the long window, the floor-to-ceiling surprise of the architectural style.

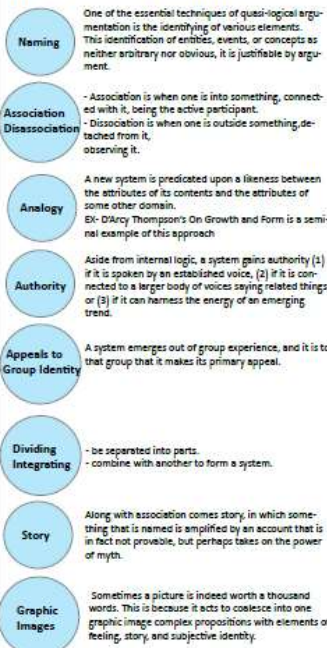
Interdisciplinary Logical Frameworks

Tend to be interdisciplinary, meaning they are so basic that they blur the boundaries.

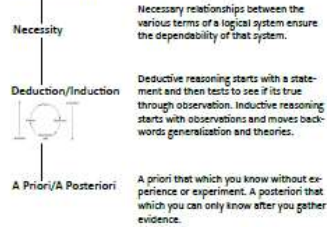
Primary/Secondary Logical Frameworks

Secondary studies go deeper into the domain mapped by the primary system, usually not expanding it with new material.

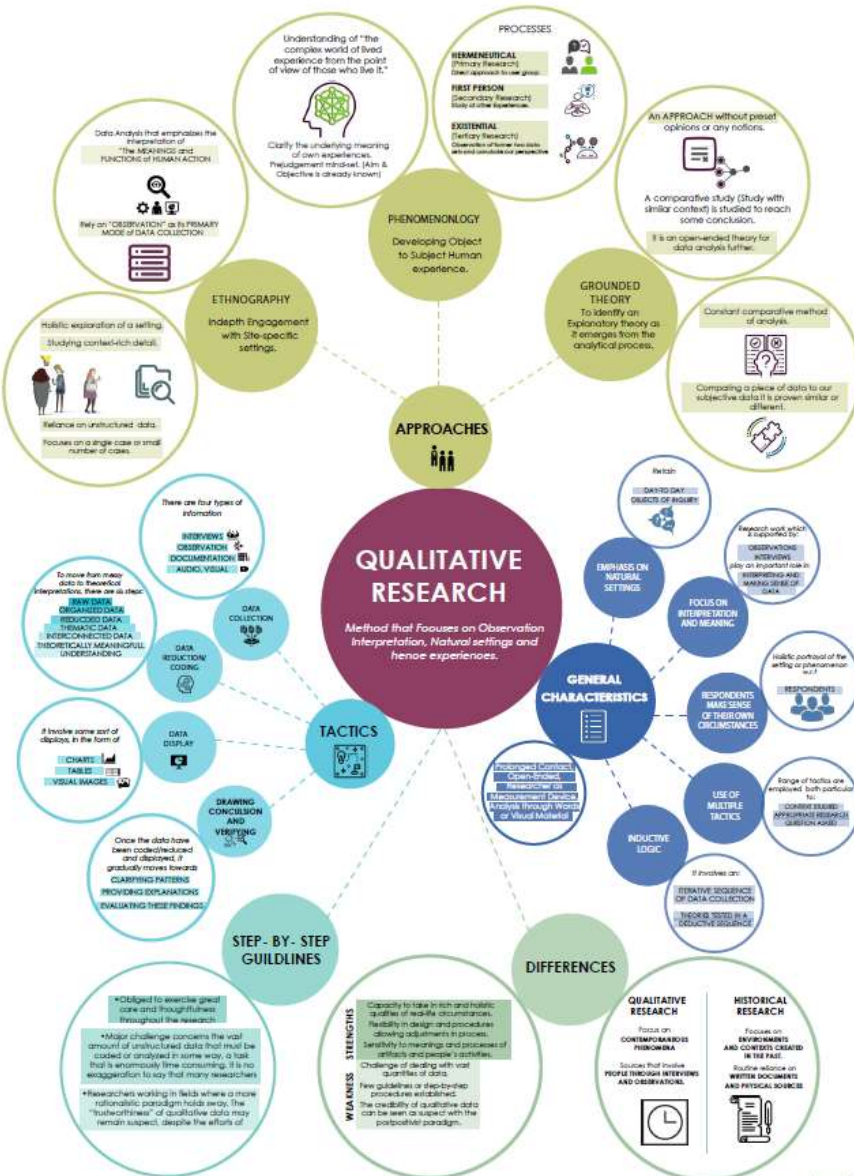
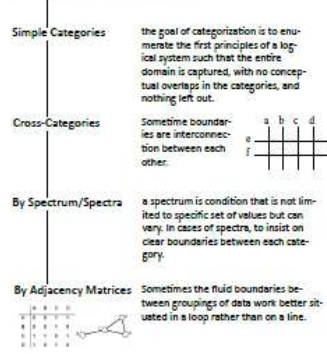
THE TACTICS OF LOGICAL ARGUMENTATION

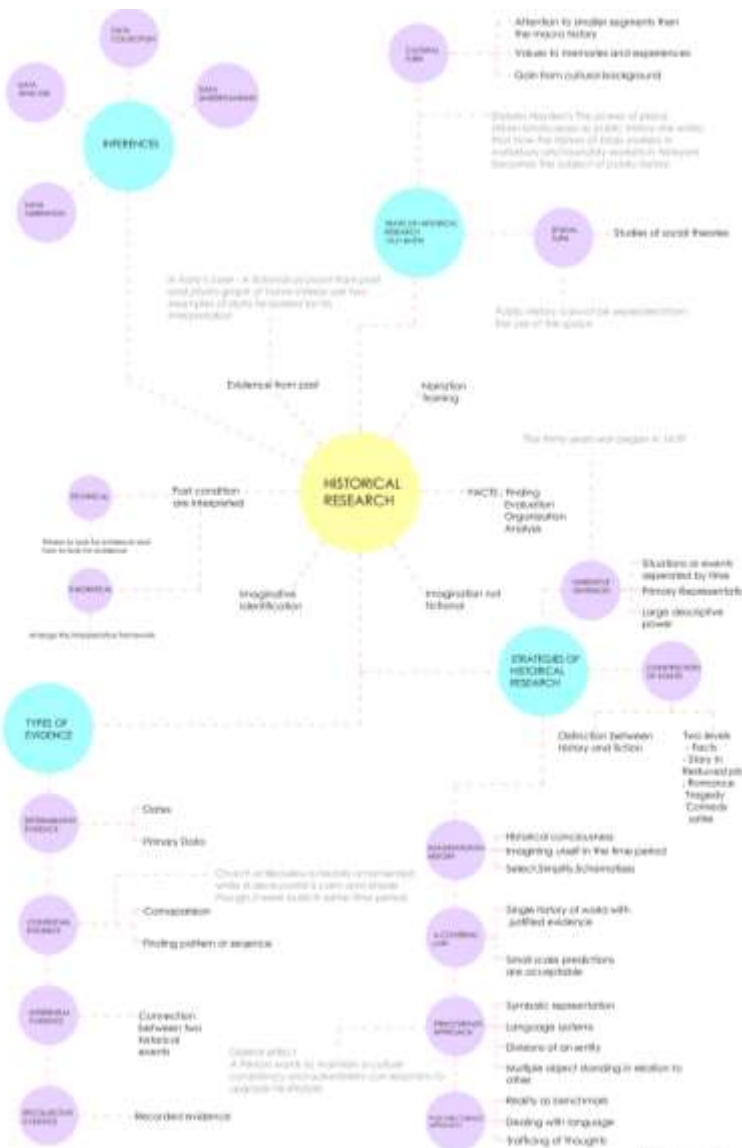


DEFINING RELATIONSHIPS



CATEGORIES AND WAYS TO ARRANGE





Action Plan

Research Action Plan

Aim and objectives

- The aim is to identify the difference and similarities between Jaisalmer and Ahmedabad.
- To reach the aim by using research methodologies like,
 1. Case studies and combined strategies
 2. Correlational research
 3. Historical research

Focus Questions

- What are the difference and similarities between padas and pols?
- What makes open spaces of Jaisalmer and Ahmedabad different from each other?
- What is the concept of having shared walls?
- What is the reason behind having narrow streets?
- What differences have occur due to different in climatic and contextual zones?
- What is the difference in elements used in Jaisalmer and Ahmedabad?
- What is the difference in scale and proportions of typologies in both cities?
- How the use of the space differ because of cultural and traditional differences?
- What is the reason behind using stone in Jaisalmer and brick and wood in Ahmedabad?
- Does the other cities of India also have certain similarities in the typology?

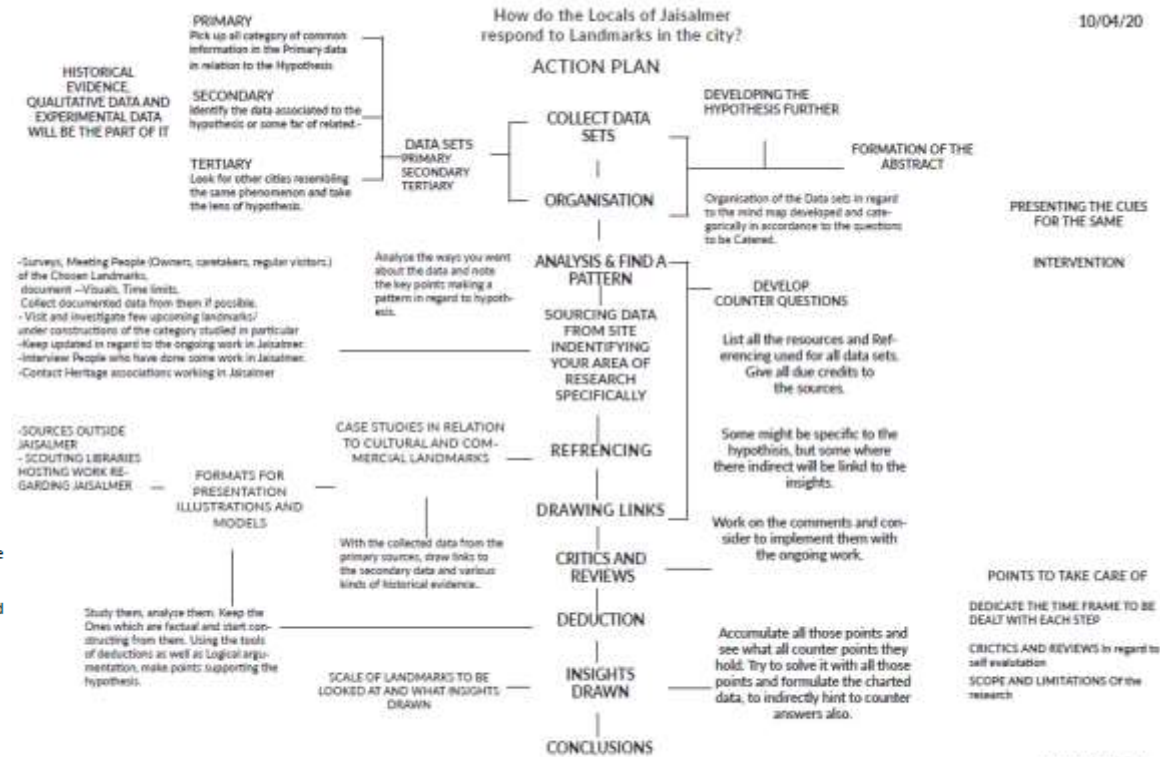
Data Collection for Research

Primary data – collect the drawings -plan, section, elevations, sketches, photos, and talk to the people living there, observations

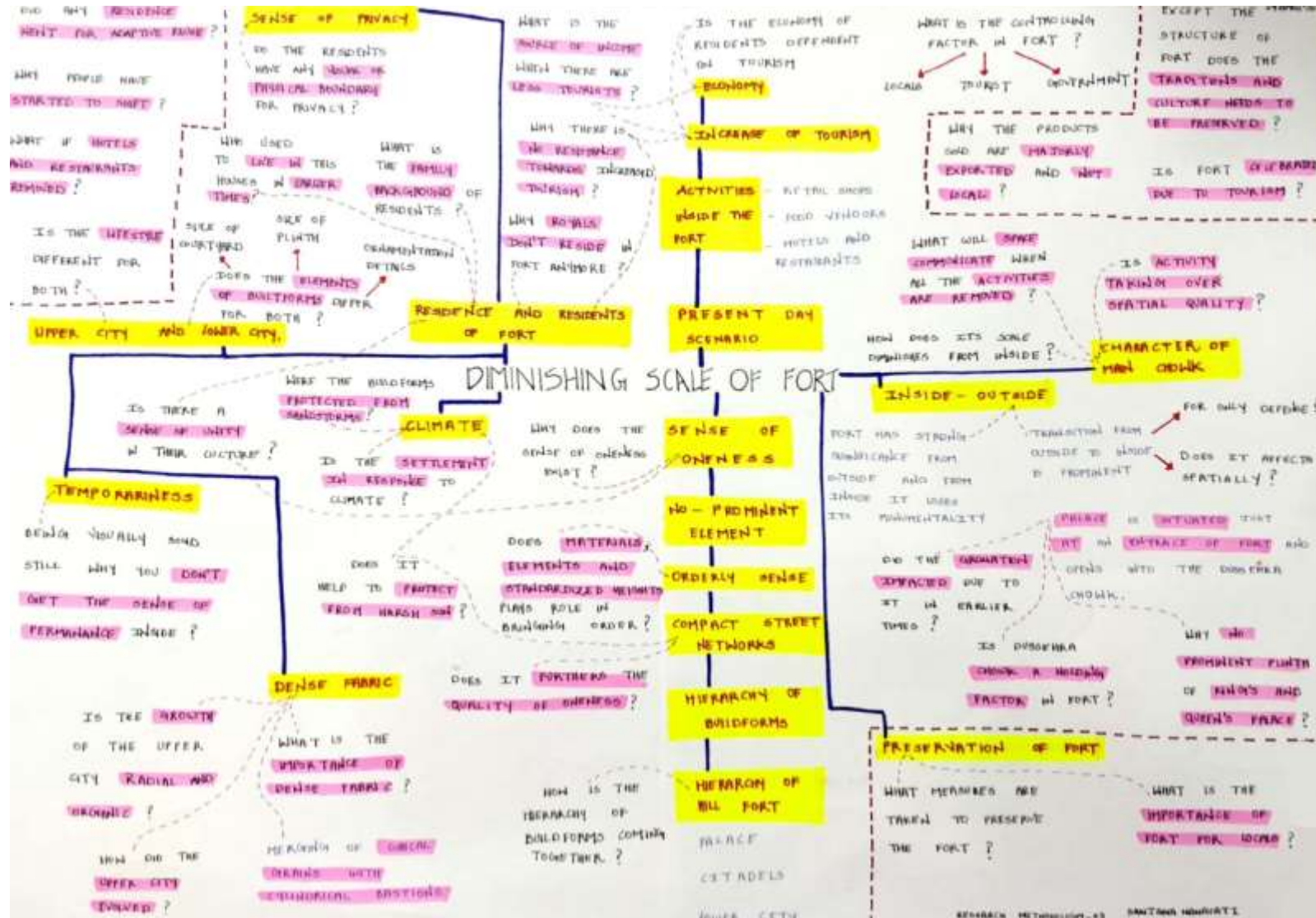
Secondary data – various articles written on similar topic, talk to the person who have done such kind of research, go through the similar kind of research done in the past

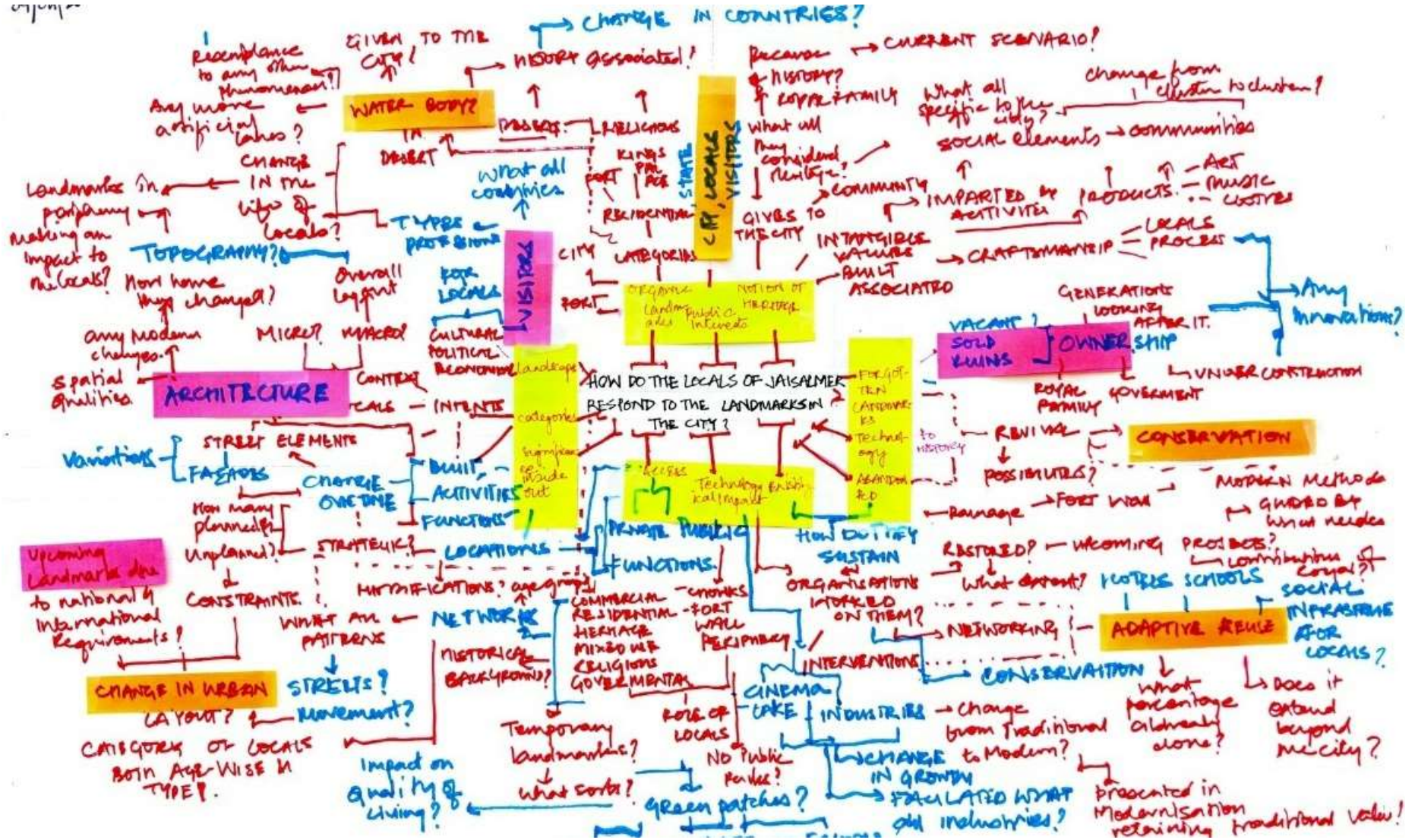
Process and Analyse the Data Collected

Marking Similarities and Differences in both Cities



Extend Mapping





Essays

Diminishing scale of fort from outside to inside

The Fort in Jaisalmer occupies a unique place in the Indian tradition. In addition to being of unequalled architectural and aesthetic significance, it also has an invaluable cultural treasure, being the only living fort in India today. It stands tall and proud amidst the desert and has strong dominance on the city from outside and from inside you see the amalgamation of space with activities and get the feeling of everything merging and eventually losing its structural dominance. There is an evident spatial transition from outside to inside and the sense of oneness is felt from inside the fort.

The fort has a strong sense of contrast when perceived from outside and inside. The transition is evident from akhai gate to hawa gate, which was made for defence purpose but it also impacts spatially. When standing in the royal square, one perceives the orderly sense and the spatial dominance is lost. Does the character of living fort signifies the sense of oneness? The royal square is the holding ground for every street and build forms in the fort. The settlement has grown organically around the square and has spread as per the shape of hill and palaces and temples open into this chowk. The fort has dense fabric and compact street network which furthers the quality of oneness. Also, the king's and queen's palace does not have prominent plinths and they directly open into the chowk showing the quality of equality of royals and common people. The people shared common wall and street as a common open space, thus unity was part of their culture.

When we talk about the present-day, scenario the idea of fort has changed its purpose. There was a time when one of the purposes of hill fort was privacy and now that same fort hosts the tourists from all around the world, and that has changed the lifestyles of residents living in the fort. The royal square is now catering to informal activities which takes over the character of the space and it further breaks down the scale of fort from inside. Also, the residents have either converted their houses into hotels, or some of them have started to shift. They do not show any resistance towards tourists, and also there is no visual or physical boundary to demarcate the private and public area. Talking about inside outside of fort, there is also difference of lifestyle of people living in upper city and lower city. There is a difference from caste, lifestyle, economy and even elements of build forms differ.

Today the fort is celebrated due to tourism. The fort here is preserved structurally but the culture and heritage should also be preserved with it. Being visually solid, the fort still has no sense of permanence from inside. Being the living fort with dense fabric, it changes the idea of looking for dominating factor inside the fort. Though there is hierarchy in organisation of space, still it is perceived as whole. The living fort is the city within the city.

Living fort of Jaisalmer: Modern life under an old stone

A living fort is a fortified region that has occupants still living their daily lives in, just like they have been since the fort was built. Being in the fort has been continuously evolving with time. Massive yellow sandstone as a material helps camouflage the fort in the yellow desert. Is the historic fabric that we search for, found intact and thriving, in the way it should be considering the passage of time and change? How does architecture affect the lifestyle of people living in the fort?

Fort is the massive identity of the city. This structure affects not only adjacent areas, but it affects the whole city. It has been constructed as a living fort on the hill. Is there its architecture that controls the life of people? How long is the presence of this massive structure according to the current scenario? There have been many parts of fort collapsed by this time. Will the fort have to lose its living status at the cost of conservation and preservation?

For centuries people continued to live as their forefathers. In recent years, however, the lifestyle of people has started to change dramatically. From transportation to the drainage system, everything needs redesign according to the lifestyle of people in the fort area. Climate change and factors like earthquake are also playing a significant and unavoidable role in the possibility of damage in the fort. Nostalgia for the past, at the cost of progress, might make the fort redundant in the future. Not only organizations should work towards conservation but also residents themselves.

There are cases of building transformation in the fort area without the study of resources and a system like sewage. Change without awareness of impacts on the fort is harmful for its condition in the future. Conservation and preservation should take place in a way that helps to keep the structure and its original value safe. The need at the time of building fort and now is different, and the challenge is to change the fort keeping in mind that it does not harm its structure and value of heritage.

Today, Jaisalmer fort remains an irregular network of residences, shops, temples, and a palace complex. Also, some portion of the city relies on the fort. There are strong possibilities of fort become only the place to visit. In this type of scenario, what would be a city without an inhabitable fort in the future? What are the factors on which the existence of its real value and heritage relies on?

The fort today demonstrated an evolving civilization. On the surface, with a rich history, Jaisalmer fort embraces modernity and walks with the times without losing touch of heritage. The revival of dying its value through conservation is admirable. The paradox is that the fort is changing and evolving with the times, but somehow in the process of evolution, it is losing its original identity.