

# CHAPTER 2

## THEORETICAL FRAMEWORK

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This study is undertaken to form a normative design approach, the study is important as it provides a theoretical context on which decisions will be based.

I will divided the study as follows

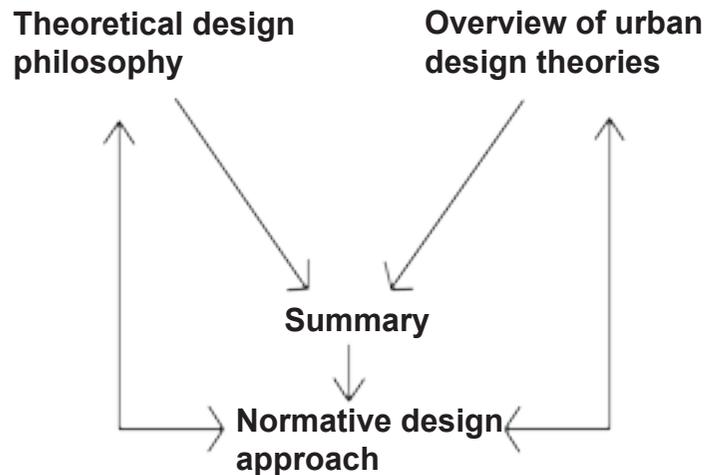


Fig. 2.1 Division of study.

### Theoretical design philosophy

#### Introduction

Humans are not the inheritors of the earth, but borrowers from future generations (Royal Commission on the Future of the Waterfront.1992.). "In shaping the places where we live, we shape the patterns of our own behaviour." (Lyle, J.T.1994, p.ix)

Humans constructed landscape patterns, which have over the past century exclude relationships between nature, the earth and humans.

A change in these patterns is needed. This change does not only mean changing our behaviour but also a change in the way we alter the environment. For our culture to survive and for the human environment to become regenerative we will have to change some of these patterns.

This change will not be possible in the long term; unless we first alter our lifestyle and start by regenerating our urban ecosystems by keeping them vital (Cerver, F.A. 1996?). This calls for a change from a consumer to a conservator society as well as maintaining life support processes. Maintaining does not refer to preserve, but rather change in the landscapes which are able to adapt to human purposes. (Lyle, J.T. 1994.) What is needed is redesign. Design in this sense means conceiving and shaping complex systems. "We have to regain of our means of supporting life, we have to embrace them, celebrate them and design is one of the major means." (Lyle, J.T.1994. px.)

#### Degenerative patterns and linear flows

Human initiatives have replaced multiple networks of unique places and nature's cycling and recycling of materials with rather simple forms and monotonous, bold processes, with constant regularity over the surface of the earth. Apparent throughout the 20<sup>th</sup> century, consumption, the through put of the one way flows became concentrated in large cities, demanding ever increasing volumes of material from the sources.

Lyle refers to James Lovelock (1988) who envisioned the earth, in his Gaia hypothesis, as a self regulating living organism, over the last two centuries industrial technology imposed the one way throughput machine system upon Gaia. The one way through put system operates as a linear time frame with a rising curve. Ultimately this system will destroy the landscape on which it

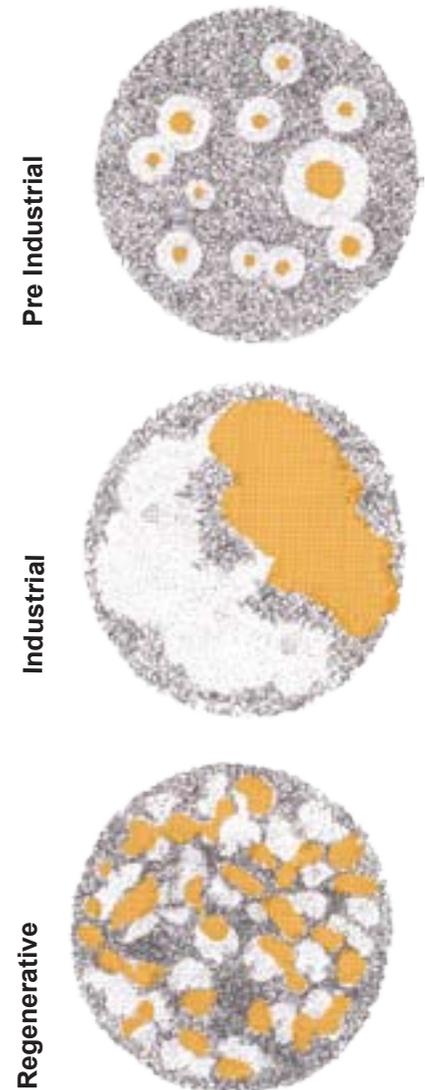


Fig. 2.2 Evolution of land use patterns.

depends. The blending of stability and change – sustainability and development will require approaches different from those of the last two centuries. (Lyle, J.T. 1994.)

Inadequacy of palliatives.

There have been, so called palliative approaches, which were based on merely alleviating the problem of degenerative methods. After the Industrial Revolution, Landscape Architects were designing urban parks in order for people to get away from the city. The use of landscapes was promoted as a means of response to the environmental and social degradation. Landscapes were valued and seen as a short term hide away from urban congestion and pollution. (Berger, A. 2006.)

These parks functioned as oasis's devoided from city life; they were seen as mere objects which didn't form any relationship between the user and the place and between the building and the landscape.

Environmentalism has grown from a defined interest towards a general concern in most scientific fields, including the profession of Landscape Architecture. The focus was placed on forms and spaces which were designed in order to express ecological principle and environmental values to the greater society. (Meyer, E.K. 2000) The ecological approach, by designers such as McHarg was an important era in the Landscape Architectural profession. This method neglected the design of the urban environment and the relationship between ecology and design. (Spirn, A.W. 2002.)

The palliative approaches taken so far in environmental regulation have not been sufficient to deal with the original structure based on one way flows. The problem seems to lie with our relationship with the environment. Rather than mitigating impacts we should create development and formulate approaches which work in harmony with nature, by recognizing that humans are part of the environment like any other specie. (Lyle, J.T. 1994.)

Designing regenerative systems

“Regenerative design means replacing the present linear system of throughput flows with cyclical flows at sources, consumption centres and sinks.” (Lyle, J.T. 1994.p10)

Regenerative systems are not limited to environmental/ecological issues individually. It should be taken further to broaden the concept of landscape materiality to also discuss its phenomenological immateriality. The immateriality is represented for their poetic/symbolic performances and their informative

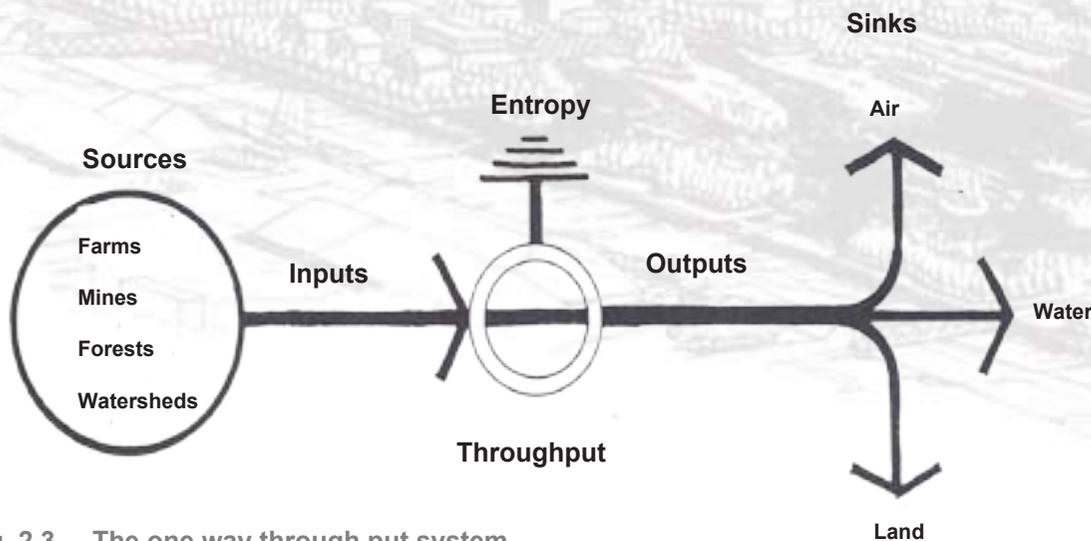


Fig. 2.3 The one way through put system.

engagement. The “materiality” can be divided according to four beliefs, the first recognise landscape as a medium which employs living materials operating within the realm of natural systems. The second belief imagines landscape as an ever changing motion picture film, rather than a motionless framed image. The third argues that if landscape is in continuous fluctuation and instability it must be conceived as interdependent systems and the fourth principle points out the association between nature and technology (Margolis, L & Robinson, A.2007.). Michael Hough further stress this concept by arguing that design should be focused on the notion of change and the opportunities which change provides. The change should be purposeful and beneficial with ecology and people as essential foundation. (Hough, M.2004.)

### Aesthetics

” The domain of aesthetics must come to be seen as coextensive with the ecosphere , rather than narrowed down to its traditional applications in art criticism , so that aesthetic values may no longer be isolated from ecological ones.” (Meyer, E.K.2000.p195.)

Together with the understanding of the processes of natural systems, equally, landscape aesthetics plays a significant role in the design of regenerative systems. Aesthetics should be used as a vehicle to emphasise and identify regenerative landscapes.

The Village of Yorkville Park acts as a unique inner – city ecological opportunity for the introduction and aesthetical display of native plant species.

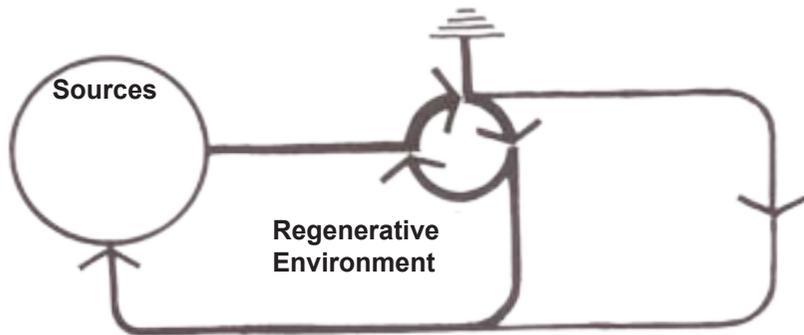


Fig. 2.4 The regenerative flow.

When designing regenerative systems Landscape Architects should refer to ecology less for methods of description and prescription and more for its ideational, figurative and substantial implications. Some ecological designs have not accommodated for human needs for order, meaning and beauty. (Woodward, J.H.1997.Signature based Landscape Design) Aesthetics and technology should be taken into the realm of ecological design to create order, meaning and beauty.



Fig. 2.5 The village of Yorkville Park.



Fig. 2.6 The village of Yorkville Park.



Fig. 2.7 The village of Yorkville Park.

- Giving form to the formless

In the 1980's the question raised by designers : *"How could one give form to dynamic processes and fluctuating systems but not resort to the modern design codes that privileged static, bounded , ideal objects in art and architecture and often regulated landscape to visual scenery, a stripped – down version of the pastoral (Meyer, E. K.2000.p189).* Landscape Architecture should give form to the interplay of dynamic processes. Every landscape, regardless of scale, should be responsive to all the interactive systems.

- Solving ecological problems

Ecological and environmental issues should be seen as cultural as well as scientific concerns. The challenge lies in designing landscapes which initiate an aesthetic experience and reduce the barriers between humans and the natural world (Meyer, E.K.2000.). Landscape Architects have the ability to encourage a land ethic and an aesthetic based on a continuum between human nature and non - human nature (Meyer, E.K. 1997.).

- Enhancing the human experience

This approach of enhancing the human experience expanded ecological design to include the aesthetics. The phenomenology of landscape design taps into the concrete experience of place. If these processes are able to merge cyclical processes with social life, then this type of design can redefine what it means, as humans, to be part of the environment.

The landscape should create the awareness that ecology flows through human life and constructions. This awareness can be established through an aesthetic experience that enhances the feeling that nature's rhythm overlap with the daily routine. (Spirn, A.W.1984.)

The aesthetics of the experience can be signified by employing materials and processes of nature. This experience can be even more enhanced by the constant modification of the landscape, through people and natural processes. (Meyer, E.K.2000.)

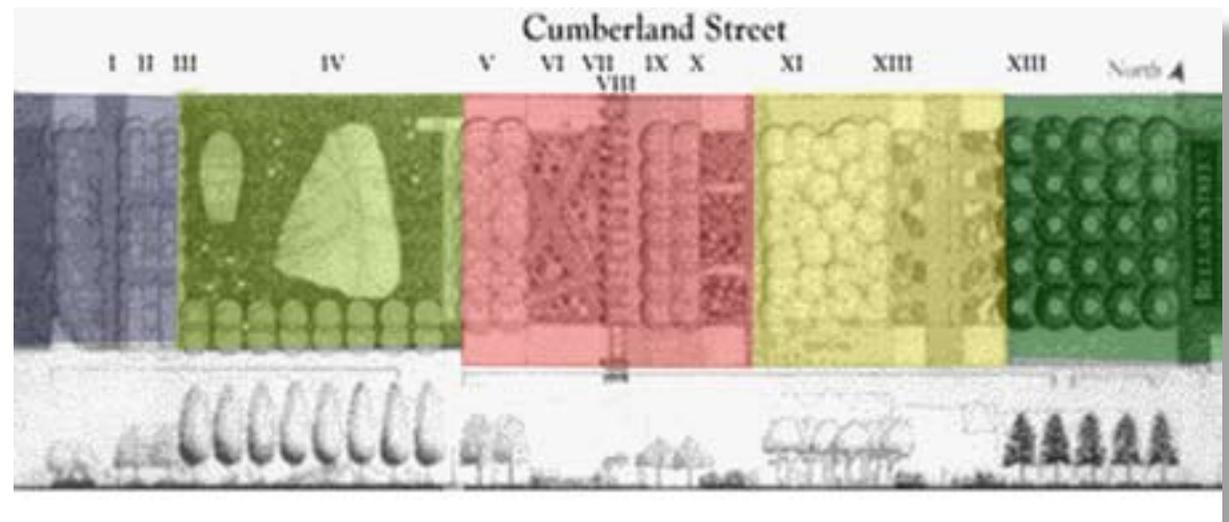


Fig. 2.8 Yorkville Park, sectional vegetation display.

*The crux of the aesthetic challenge lies in: "How to give form to the marvellously unique conspiring of people and place of elements and systems of history and happenings. " (Zanzot, J.1997.)* Thus ecosystem in an aesthetic sense should be a powerful experience which can be enhanced through the application of appropriate technology.

#### A different kind of technology

Regenerative systems should play an important role in global renewal, since these systems work in continuous interaction with both people and natural systems; they require natural as well as scientific information. Solving the environmental and resource dilemma is not depended on technology, but the relationship of humans with the environment is the central issue. It is important to realise that technology is an expression of that relationship; our survival will depend on how we apply technology in the future. For future development technology should therefore be based on natural processes. (Hough, M.2004.)

#### Dilemma of Development

The dilemma is that development provides for habitat and sustenance, but development inevitably alters our environment. We can either adopt the view *"that humans have no right to wreak such devastation on a natural community purely for human interests ..."* (Lyle, J.T.1994. p20) this view has been expressed in environmental literature since the 1960's. On the contrary, we can argue that humans are an essential part of the environment and by developing the land for human purposes is not qualitatively different than changes made by other species.

The former view is purely that of preservationists and is challenged by the enormous amount of people living on earth. The latter view raises the issue that development of humans and that of other species are critically different. Technology is the all important difference and as mentioned previously, the past

two centuries development patterns and concepts of nature are indications of this. (Lyle, J.T.1994.)

The concept of viewing humans and nature as separate entities has filtered through to building, planning and design. The resolution of these must be found in an ecosystemic view which includes the whole urban environment.

#### Ecosystemic Approach

In his essay *"Human ecosystems"* Lyle brings forward the concept of landscape as ecosystem. (Lyle, J.T.1985.) Ecosystems are evolving entities which regulate the development of the species. The species present in any environment forms consistent, but complex and not entirely predictable sets of interactions. Thus they form an ecosystem where, in urban areas, human ecosystems are the ordering systems of life. (Lyle, J.T.1994.) These human ecosystems embodies ecological forms, they consists out of the cultural, emotional and physical realm. Landscapes like these have deep form which is shaped by interactions of inert processes and human vision. Deep forms are a meeting of form, truth, psychology and nature, art and science. (Lyle, J.T.1991 *Can Floating Seeds make Deep forms?*)

By clarifying complex systems of relationships involved in natural processes, the ecosystem concept establishes a theoretical framework for regenerative life support principles.

To form an ecosystem approach it is essential to understand that its primary concern is with the interactions amongst parts, which consists out of the continuous evolving culture, technology as well as the natural world. Together they form relationships which should be utilised in the shaping of spaces. The regenerative landscape should not be pre conceived it needs to have the ability to creatively form frameworks which can change interconnect and reinforce each other. For any design to be regenerative, the supply system of materials and

energy must be continually self renewing. (Lyle, J.T. 1994.)

Thus, an ecosystem approach:

- Includes the system as a whole
- Focuses on the interrelationships among the elements
- Understands that humans are an integral part of nature.
- Identify the dynamic nature of an ecosystem which is similar to a moving picture

## Overview of urban design theories

It is important to study traditional urban design theories to see which are applicable and how they can be used in the development framework.

### Traditional urban design

After studying various urban design principles from Lynch, Trancik and Bentley et al, it is clear that urban design is an integrated process which, when correctly applied, enhances the overall legibility and cultural fit. These theories are mostly focused on the visual, social and cultural realm of the urban environment but show a lack in giving guidance to ecological regenerative principles within the urban environment.

### Urban Ecology

In his book, City and Natural Process Michael Hough argues for using urban ecology as a basis for shaping our cities. The city is a constant process which evolves, which depends on life processes and the inter connectedness of the living and the non - living environment. (Hough, M.2004.) Thus the great challenge of urban ecology lies in the design process, a process which should form visible links between urbanism and ecology on a variety of scales. The

problem with holistic ecosystems is demonstrated in cities as the ecosystem city is not self regulated but regulated by humans. (Rebele, F. 1994.)

### Summary

Through this we can come to the conclusion that the landscape should function as an ecosystem, stitching connections between people, technology and the landscape. (Lyle, J.T. 1994.) The task of implementing an ecological view of cities has only recently emerged. If there is such an urge for incorporating ecology into the urban environment and the concept of “urban ecology” is emerging as a highly valued part of present day urban design, then why haven't regenerative ecological urban principles not yet been formulated?

Although traditional urban theories and principles have not addressed or considered the function and the interdependence of ecology, they should still be used as an important element in any urban design project. There is a gap in urban design theories, a gap which needs to be fulfilled by incorporating regenerative urban design principles which supports the view of the city as an ecosystem. What they would mean, how they should function, what they should do has all been clarified. They should just be formulated and applied. These principles will be translated to form the essence of the theoretical philosophy. (Refer to Chapter 5)

### Normative design approach

The influence of the designer cannot be concealed and the human origins cannot be ignored. Sustainable landscapes are signified to have a higher level of complexity than cosmetic landscapes. The intricate ecological relationships are sometimes hard to preserve, therefore it is important to give them conspicuous expression and visible interpretation.



*“The hand of the designer can be as heavy on the land as a highway interchange or a strip mine. Ask whether that influence is destructive or sustainable is it to trivialize the complexity of relations between humans and the rest of the world.” (Thompson, J.W & Sorvig, K. 2000.p18)*

