

Chapter 2

PROLOGUE

This chapter forms part of the theoretical argument and contextualise the issues discussed in the introduction of this dissertation.

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2.1_WORLD VIEWS OVER THE PAST CENTURY

2.1.1_INTRODUCTION

The current issues of global warming, environmental issues and social injustices originate from a worldview that has been prevalent over the last 500 years (Hes and du Plessis, 2015:24). The notion that ‘human beings are the measure of all thing’ that developed during the Renaissance period has shaped our views and ultimately the landscapes and cities we live in today (Lyle, 1994:21). Man assumed a central position within his environment. Influential scientific discoveries made by Rene Descartes, Isaac Newton and Francis Bacon were among the few that expanded on the relationship between man and its environment. This relationship became known as a mechanical world view, that we live in a universe that functions like a very sophisticated mechanical system governed by universal laws. This enables each part to be studied individually to determine their behaviour in order to replicate and control them. This places human beings in a position to control nature in order to create all kind of useful things to improve life of humans (Hes et al, 2015:24).

The industrial revolution gave charge to a great number of technological achievements and advancements that contributed to the development and evolution of mankind. Mass production and manufacturing along with the automobile and transportation industry gave rise to new modernist ideologies of what constitutes the modernist city and became a representation of urban progress (Graham and Marvin, 2001).

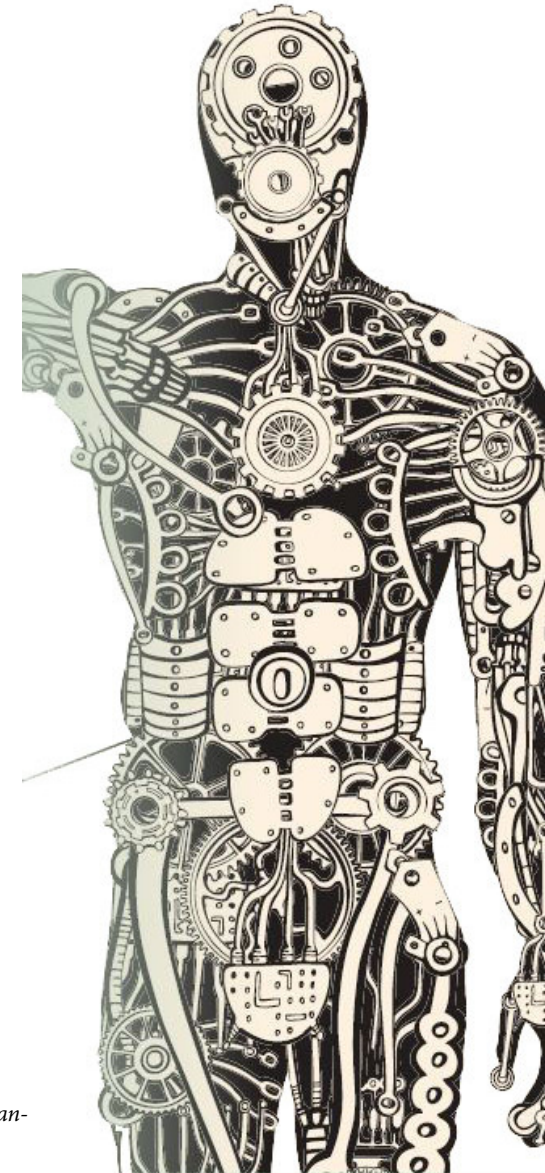


Figure 2-01: Bionic man, man as part of a mechanical world view (Hes and du Plessis, 2015)

2.1.2 THE MODERN CITY, IDEALS AND IDEOLOGIES

The ideals and notions informed by the philosophical and organisational principles were closely integrated into a wider set of rationalities and ideals that emerged in the urban planning movement during this period. This was based on the idea of rational, comprehensive planning that drives progress towards unitary, coherent and emancipated cities. Both infrastructural development and urban planning were constructed as key elements of the project of modernity, where ideals of universal rationality, progress, justice, emancipation and reason were applied to all areas of social life (Graham et al, 2001: 41).

These ideologies became the basis for urban planning, policy and development. The idea that the city was a single, objective entity became a dominant basis for debate among engineers, planners and urban reformers between 1850 and 1920. The growing profession of urban engineers at the time understood the city as a systemic 'machine' that needed to be rationally organised as a 'unitary thing, by using the latest science and technological practices at their disposal. This notion further developed to view the city to be an inorganic and fabricated environment, informed by mathematics and the ultimate product of the engineer (Boyer, 1994: 116).

Engineers, at the time, became the paragons of the public works reform culture to rationalise and give order to a vast expanding society within a troubled and apparently chaotic industrial metropolis (Graham et al, 2001: 44). The constructed infrastructures that were developed were highly visible and a foci for media and touristic attention (Graham et al, 2001: 44). The resultant of becoming an 'urban dowry' of 'iconic landmarks' highly visual and present, increasingly disrupting and fragmenting many urban landscapes as modern urban identity was constructed around the full range of mechanical and electromechanical infrastructures. Neumeyer (1990, 17) describes it best by saying: "Like blades, the engineers' iron structures chopped up the body of the city, fragmenting the urban tissue...". Bridges and elevated railway structures along with other modern objects of unfamiliar shapes became significant new elements in the traditional cityscape. These new elements of modernity took on a disturbingly powerful and threatening presence that would ultimately become the image of a metropolis, cutting up the city as a response to connect isolated objects over distances (Neumeyer, 1990: 17).

"Like blades, the engineers' iron structures chopped up the body of the city, fragmenting the urban tissue..."

Modern urban planning supported the ideals of modern infrastructural development at the time. Its practices along with its associated architectural theories supported the rationalisation of whole urban landscapes, backed by rationalisation, cohesion, science, technology, the celebration of the machine along with the modern aesthetics it would represent (Graham and Marvin, 2001:49). Above all, planning sought to realise the ideals of cohesion by establishing order to the fragmented forms - a response to the uncoordinated infrastructures and apparent chaotic urbanisation in the late nineteenth century and early twentieth century. This period was widely seen as the means to realise technological progress (Graham and Marvin, 2001:52). New infrastructural networks, as noted through history, became central to the formulation of new normative aspirations for planners, reformers, modernisers and social activists in order to define their notions of what could be considered a desirable urban order, in other words – the good city.

Influential architects and urban utopians such as Le Corbusier and Frank Lloyd Wright's utopias envisaged cities based on highways and dominance of the automobile as the primary ordering device for cities;

The 1920's futurist' obsession with air, rail, cruise liners and motor travel and Ebenezer Howard's concern for municipal rail connections (Graham and Marvin, 2001 : 64).

These visionaries were fascinated by the potential these new infrastructural technologies would have to sustain radical shifts in the social order as it is embodied in the transformed physical landscapes of their preferred urban utopias. They believed that modern technology "had outstripped the antiquated social order, and the result was chaos and strife. In their ideal cities, however, technology would fulfil its proper role," in order to integrate the planned metropolis into a functioning, efficient, harmonious and modern city design (Fishman, 1982:13). Furthermore, they suggested a radical decentralisation of the industrial metropolis that would be a planned and ordered dispersal where the new mediating capabilities of singular infrastructure networks would be used to sustain the coherence of the new extended city (Fishman, 1992:13).

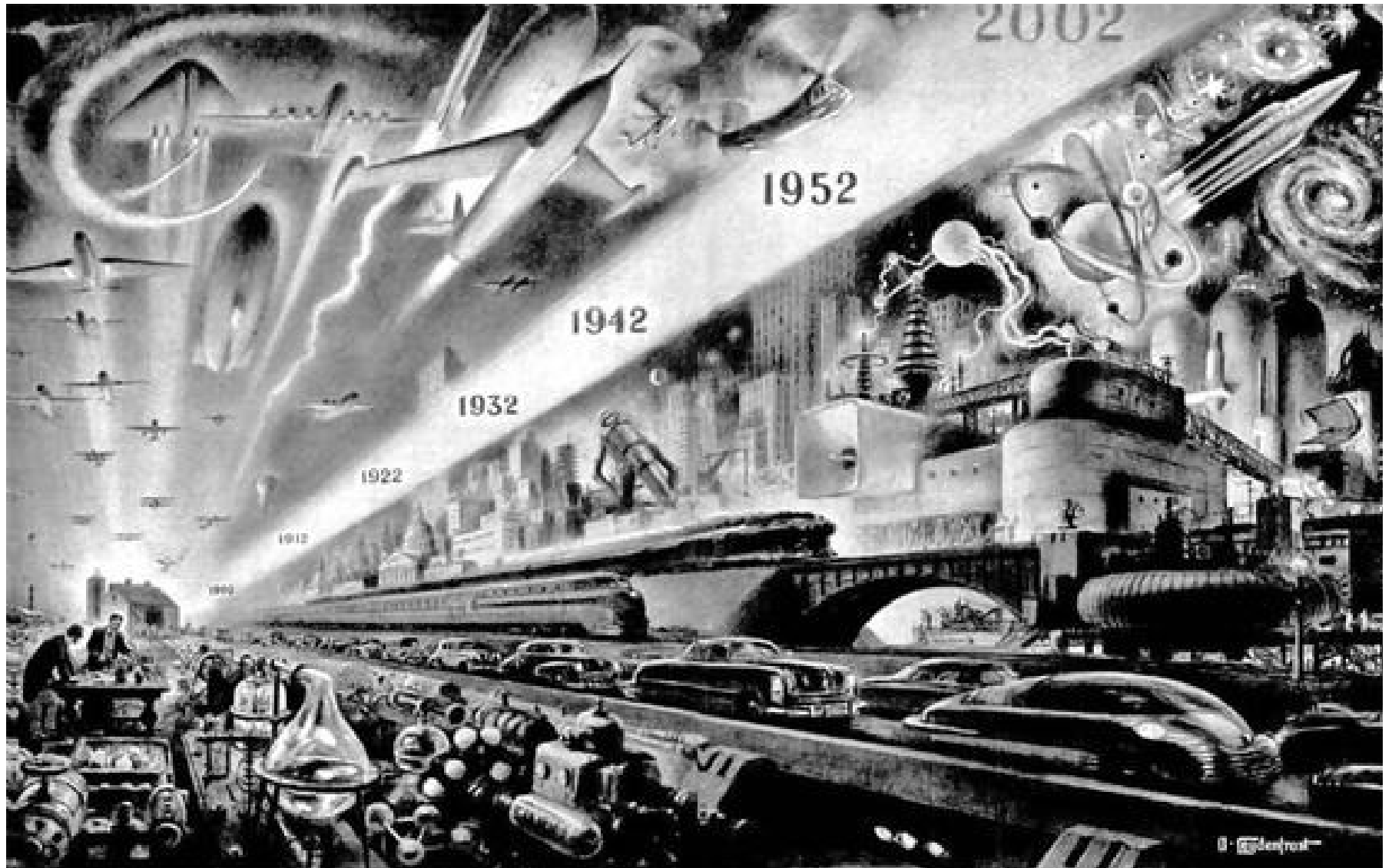


Figure 2-02: The modern idea of linear technological 'progress' through technological and infrastructural systems (Graham and Marvin, 2001: 48)

2.1.3 THE FAILURE OF THE MODERN IDEAL

Between 1960 and 1980, the failures of the modern infrastructural ideal became apparent as powerful social, economic and environmental critiques exposed the inadequacies constructed by both modern infrastructural development and modern urban planning. These critiques along with new flows of globalisation, information and technological development saw the slow deterioration of infrastructure services to collapse and decay due to the expenditure on new facilities and technologies and backlog on maintenance.

Modern urban planning became highly criticized by various institutions as being inflexible and unable to meet new demands driven by the constant flux of globalisation and new technological developments (Graham and Marvin, 2001:104).

Ultimately, modern urban planning lost its confidence and its core notion of 'progress', order, cohesion and technical rationality and its assumed benefits for all as environmental and social movements lambasted and exposed its underlying assumptions and inadequacies.

Figure 2-03: Plan Voisin, proposal done by Le Corbusier in 1925 for the redevelopment of Paris showing isolated towers in the landscape (Graham and Marvin, 2001).

The static, inorganic and orderly models as ideals to bind the metropolis into a functioning 'machine' or 'organism', became an impossible task to cope with the turmoil of social, economic and cultural change as cities evolved (Graham and Marvin, 2001:104).

The emerging visions imposed by modernist planning sought to impose systematic and abstract space upon the complex social and lived spaces of the industrial metropolis.

Henri Lefebvre (1994:238) described it as "the simple, regulated and methodical principle of coherent stability to the spatial form of temporal rhythms of the massive, chaotic metropolis".

There are a number of interrelated issues with this approach and world view. They are summarized on the following page.



- ***Technological approach:***

Projects that were developed for the city were mostly approached from a technological bias that left the decision making for the engineers without understanding the social and spatial significance and the influence on territorial capacities (Borges, nd:5). This approach believed that the power of technology will set society free, both from material deprecation and other constraints imposed by human characteristics (Dewar and Uytendogaardt, 1995:5).

- ***Building and spaces as secondary***

The fascination with transportation infrastructure resulted in buildings and spaces becoming secondary as a means to define the movement of people from place to place. Buildings were removed from the greater idea to construct movement, and yet completely determined by it as buildings became free-standing objects in space as opposed to being part of the the collective environment (Dewar et al, 1995: 5).

The infrastructurization of the the modern city was also the beginning of its conceptual, projectual and physical fragmentation (Borges, nd: 5).

- ***Focus on the parts and not the whole***

The primary emphasis of planning was placed on the parts and not the whole. Specialization within the built environment has resulted in fragmented decision making, forgetting that the quality of settlements is determined by how the parts are brought into relationships with each other (Dewar et al, 1995:5).

- ***Cultural issues of place, time and human experience :***

The modernist era marked the beginning and transformation of the pedestrian city to the networked city. The mentality to optimize speed and vehicular safety rarely considers the qualitative and cultural issues associated with place, time and human experience (Borges, date: 4).

2.2 THE NEED TO RETHINK THE RELATIONSHIP BETWEEN INFRASTRUCTURE AND ARCHITECTURE

2.2.1 THE REMNANTS OF THE MODERN CITY: - NON PLACES AND LOST SPACES

Modern town planning is a relative new and highly willfull experiment and reaction to urban problems that resulted from rates of urban population growth and from the impact of technological advances on the urban fabrics that required adjustments in order to accommodate them satisfactory. By doing so, it's implementation conciously broke with the traditions of traditional settlement-making. Traditional cities valued the importance of using open spaces as structuring systems, that are defined by the architecture, to integrate the movement of people between places (Trancik, 1986).

Today, cities such as Johannesburg characterised by a series of mono-functional infrastructural devices that serve the singular function of movement over vast territories without integration to its immediate physical, natural and social environment. These areas have lost its sense of place and as Trancik (1986) refers to as being “lost”, as they have no particular function within the urban environment. This will be further discussed in Chapter



Figure 2-04: A illustration for the invitation of the Winter 2011, University of Michigan Taubman College. The studio aimed to investigate alternative ways to redefine the monofunctional nature of the highways into a productive urban system (Hwang & Moon, 2011).

Figure 2-05: Artist impression of Safavid-era Ishfan - Described as the pinnacle of the garden cities characterised with harmoniously-designed pavilions and spacious throughfares (AJAM Media Collective 2012).



2.2.2_ ARCHITECTURE'S ROLE TO EVOLVE

The reductionist approach applied by modernist thinking has led to a series of monofunctional infrastructural devices that ultimately fragmented the city, creating divisions between people and places. The lack of spatial response and integration within the urban fabric, specifically those that accommodate the movement of people over vast territories, resulted in spaces to be undefined, isolated and lost within the construct of the city.

It is therefore important to re-imagine the function and relationship between architecture and infrastructure to avoid the existence of non-places. In order to achieve this, it should allow for a more multiplicit and multifunctional solution to address the complexities and issues found within urban environments.

The emerging field of regenerative design, developed by Bill Reed and Pamela Mang, consider the value of place as the fundamental element to address urban regeneration. The theory acknowledge that instead of a functioning mechanical machine, our environment are made up of complex system within systems that give structure to our environments. The idea of place and place making will be discussed in the following chapter.

Figure 2-06: Leon Krier on legibility: Krier illustrates the legibility of the environment by a series of layers that give structure to the city (<https://www.architectural-review.com/leon-krier-on-sustainable-urbanism-and-the-legible-city/8659343.article>).

