A CAUTIONARY TALE

Architecture as social commentary

Research Project Explanatory Document
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ABSTRACT

This research project is about the future of our built environment. Cities are the most complex human inventions, to understand a city is to peer into the social, cultural, economic and political fabric of a nation. Ever since humans first settled in cities, the structure of it have always echoed the structure of that society. When society changes so will the fabric of our cities.

We are facing the greatest challenge not seen since the last Ice Age, the imminent global climate catastrophe will upend the entire ecosystem, and the rise of artificial intelligence, automation will severely challenge our socio-economic theories.

How will our cities adapt to these crises? This project explores a select few visionary architectures, using their methodologies to extrapolate an informed architectural language that can be used to construct a vision of a futuristic Auckland.
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1.0 INTRODUCTION

It is human nature to dream of a better place, to dream of a perfect society, a place where everyone is equal and happy. Often these ideal worlds are critiques of the flaws in the real world, whether it be the perceived moral crisis of ancient Greece, which paved the way for Plato’s the Republic, or the pervasive control of the Catholic Church in the 1500s that spurred Thomas More’s Utopia, ultimately giving a name to this ideal society. In architecture and urban design, Ebenezer Howard’s Garden City, Frank Lloyd Wright’s Broadacre City, and Le Corbusier’s Ville Contemporaine were all responses to the problems caused by the rapidly industrializing world.

In the 1920s architects like Le Corbusier were confronted with the challenge of adapting the old cities of Europe to suit the mechanization of the society. Today we are already in the process of the third industrial revolution, the fundamental economic, social and governance of our society will see a paradigm shift. Parallel to the impending social upheaval, we are also facing the challenges of climate change. This research seeks to explore the visionary dreams for our generation. What crisis will we face? How will our architectural vision for this future adapt to these crises?
1.1 UNDERSTAND THE PROJECT

Utopia contains both Greek term “eutopia” meaning good place and “outopia” meaning no place. Utopia is unrealistic, an unattainable goal. Utopian designs in architecture are always in response to an imminent crisis, but it always turns into the personal fantasy of the designer, which makes many utopian designs monotonous, boring and in some cases even dictatorial. The Colossus of Prora on the island of Rügen was such a vision. Nazism, Fascism, and Stalinism are all attempts at realizing a utopian vision. Even if the designer does not harbour malicious intent, result is still a dreary vision of monotonous uniformity.

For every utopian vision, scratch a little under the surface it becomes a dystopia of sort. When the burden of perfection is lifted from utopian designs, it becomes something more palatable, less monolithic, more vibrant, more diverse, inclusive and multicultural. When perfection becomes the norm, it is in fact the new mediocrity. With the burden of perfection gone, visionary design will just be presenting the vision of the designer addressing certain pressing issues, visionary designs are much less idealistic, lighter version of utopia, it can be viewed as a rebuttal to some utopian ideals.

Visionary design as a rebuttal to utopian design is incomplete, it can still be classified as utopian designs. The scope of the utopian vision depends upon the individual designer and how the designs are perceived by the audience, making such distinction between visionary design and utopian design very subjective. Thus, a clearer definition of the project is needed.

Futurist Stuart Candy states that there are four types of potential futures, probable, plausible, possible and preferable. Utopian design and to a certain extent visionary design can be categorized as preferable. Visionary means to plan with wisdom and foresight, this leaves little room for alternative version of the future. Plausible on the other hand, investigates alternative economic and political futures models, it provides social commentary on the preferable future or a cautionary tale on the complacency of society. Plausible future designs are speculative design, it brings an alternative socio-economic commentary on the solutions for the Third Industrial Revolution as provided by Jeremy Rifkin and a cautionary tale on the society’s complacency on the imminent dangers of Climate Change.

Architecture is speculation for the future, designers makes decision that they believe will meet the demand of the future, by this very nature

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2 Dunne and Raby, Speculative Everything, 2.
3 Dunne and Raby, Speculative Everything, 4.
architecture is always seen as a visual form of logical problem solving. This works well on individual building or on a neighbourhood level, it’s a type of preferable speculation design, using architecture as a solution for a set of challenges identified. Such speculation works for short term planning where the challenges and problems can occur with high degree of certainty. However, it’s not suited for long term speculation such as this research project where the speculation period is 80 years away from now. Hence the plausible speculative nature of this project, portraying the spatial qualities of the socioeconomic and environmental pressure of the future. It does not seek to profess as the solution of the defining problems of humanity.
1.2 AIMS AND OBJECTIVES

The aim of this research project is to speculate on the cities of the future, by finding an alternate vision to Jeremy Rifkin’s Rome master plan. This will explore how functional spaces change according to the socio-economic demands of the Third Industrial Revolution as presented by Jeremy Rifkin, and the environmental pressures of the climate change crisis.

Architecturally, there are two objectives. The first objective deals with form, the second deals with atmosphere.

The first objective is to explore the alternatives to the traditional two-dimensional urban fabric, through analyses of visionary architectural designs. This will form an architectural language that can later be used to reinterpret various functional spaces of the future, it will focus on the formal aspect of space rather utilitarian aspect of architectural space.

The second objective is to raise awareness on the effects of climate change and speculate how the challenges of the Third Industrial Revolution might change society. This is achieved by constructing a spatial and collective social identity, using stylistic representation in the final rendered images, the social and spatial identity refers to the ambiance, atmosphere of the society and the built environment. This newly constructed collective social and spatial identity will be a window into the future, a cross-section of the social structure in the year 2100.

The less than ideal vision will question the long-standing norms of architects and designers that presents the best-case scenario for their designs. Never accounting for decay or how the space might be occupied when the society is facing major disruptions. The second objective also raises awareness regarding the question of can space form an identity that corresponds to the hardship experienced by the people within it. If society is predicted to experience hardship, why are all the architectural representations of utopian designs always so pristine?

The research outcome will be a portion of an Auckland CBD-wide mega structure, encompassing all the necessary functions reinterpreted for a post Third Industrial Revolution society. The space and form of the design will be the result of the society of the future, not the solution to the potential problems of that future. This passive and reactive stance on architecture is different from most visionary designs, where the design itself is presented as the solution and thus the one true way. Such absolutism is remanence of the flaws of Utopia.
1.3 SCOPE AND LIMITATIONS

This project deals with the vast scale of urban design, rethinking how a city manifests itself to meet the challenges of the third industrial revolution as well as the more intimate aspects of reflecting the consequences of climate change. Its effects on how our city is perceived on an individual level. This broad spectrum of varying scope requires clear boundaries on what will and will not be part of the research.

The physical dimension of the project can be limited to a specific site, only the structure and buildings within the site will be designed. Parts of the structure outside of this boundary should be replicated throughout the Auckland CBD area.

In designs that deals with the unknown future, it is also important to set up a time frame which the project will take place. The year 2100 will be chosen, it is the furthest prediction most can reasonably predict according to data acquired through research.
SELECTING UTOPIAN THEORIES

To inform the final design, several visionary theories need to be analysed and studied. Historically, utopian or visionary architecture that deals with city scale designs can be separated in two waves. The first are the modernist utopian visions of the early 20th century, the second are the reactionary utopian groups of the 1960s, who were against the modernist utopian vision. Today as we face the challenges of climate change, a new utopian designs such as the eco-cities are emerging. They prioritise sustainability as the paramount design driver.

The modernist utopia was a response to the second industrial revolution and the adoption of automobiles, the eco-cities of today is a response to climate change, they are both the product of their respective crises. The overtly optimistic, sterilized vision presented in modernist utopian designs were questioned by the visionary groups of the 1960s such as the Archigram, Deconstructivism, and the Situationist International, aside from the autocratic mediocrity, this rebuttal of the modernist orthodoxy is also caused by a shift in the crises faced, from the desire for the mechanization of society to that of the detrimental impact when the mechanization of society culminated in the suburban sprawl. Many of the visionary designs of the 1960s have also foresaw the eventual automation of the economy and the disruptions to society it may bring.

Today we are facing another imminent paradigm shift, the optimistic vision of the eco-cities rings hollow as the modernist utopian visons of the 1930s. We only have 0.5 to 1 degree Celsius of buffer for global surface mean temperature (GSMT) to rise above the pre-industrial global average, before we reach the crescendo of the Holocene mass extinction.4 The reason for pessimism is supported by the tragedy of the commons, individuals of a society see self-interests above the good of the group. This developed into the Tragedy of the Horizon coined by Mark Carney. This metaphorical horizon is the economic, financial cycle of the corporations and the political cycles of elected governments. The short-term cycle of 3 to 10 years falls short of the catastrophic impacts of climate change which lies beyond that horizon.5 The visions of our cities should reflect this reality, the 1960s utopian groups sits well to inform that vision, the eclectic aesthetics reflects the underlying imperfections of the envisioned society, a dystopic utopia or a utopian dystopia.

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Visionary utopian groups explored includes.

- Situationist International.
- Archigram.
- Deconstructivism.
1.4 RESEARCH QUESTION

How can visionary architecture be used as social commentary of the future, with respect to the challenges of global warming and the Third Industrial Revolution?
2.0 DEFINING THE PROJECT

The following section is an overview for visionary designs, it is important to understand what crises sparked a visionary movement, and their responses to it in the form of design methodologies.

An important outcome from this chapter is to have an overview of the methodologies, analyse them within the wider context of what the future socioeconomic structure will be according to the criteria set out by Jeremy Rifkin’s Third Industrial Revolution. The historic parallels are also important to understand the outcomes of this project in a wider context with regards the environmental pressure of the future, since it’s one of the most prevalent crisis shared by most visionary designs.

The overview of the visionary groups is followed by analysis of specific precedents from these visionary groups.
THE PROBLEM OF OUR GENERATION

We are in the midst of the sixth mass extinction\(^6\), the cause of which is entirely man-made. It is predicted when global mean surface temperature rises 2 degrees Celsius above the preindustrial average, as much as 18% insects, 16% of plants, 8% of vertebrates could be lost as a direct result of rising temperature\(^7\). Such disruption to global ecology can have devastating ripple effects throughout the food chain. A two degrees Celsius rise would also see an ice-free Arctic every ten years\(^8\). The lack of ice would accelerate the runaway effects of global warming, darker colours of the ocean absorbs more heat than the white reflective ice caps, a warmer ocean would accelerate ocean acidification and ocean deoxygenation. As much as 90% of the worlds coral reefs will be wiped out if the global mean temperature were to rise above 1.5 degrees Celsius.\(^9\)

We are witnessing a death spiral of Earth’s ecology. A two degrees Celsius warmer world will be the point of no return, yet political gridlock and short-sighted constituencies prevents any meaningful actions combating this imminent disaster.

The grim vision of our near future is only the consequences faced by nature. Climate change will be much crueler to humanity and the civilization we have built. From our perspective, the disruption of water cycle will have the biggest impact on our lives. Warmer atmosphere can hold more moisture,\(^10\) which means precipitation will be less frequent but more intense. The disruption of air currents will also cause more extreme weather events, devastating coastal cities, coupled with sea level rise, we might see small island nations forced to evacuate their entire population, turning them into climate refugees. All the impacts were concluded according to 1.5 degrees or 2 degrees Celsius rise above the preindustrial average in global surface mean temperature. In 2017 we have reached the one degree Celsius threshold, 0.5 degrees is all the buffer we have left.

To understand the impact of climate change and adapt our cities to its challenges is one of the prime objectives of this research project. Sea level rise caused by climate change is not a sudden increase, it’s a gradual process where the coastal land is rendered useless due to the constant erosion of the coastline. The combination of sea level rises, amplified by storm surges and intense weather events means sea level can rise as much

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\(^7\) Portner and Roberts “IPCC Report”, chapter 3, 179.
\(^8\) Portner and Roberts “IPCC Report”, chapter 3, 178
\(^9\) Portner and Roberts “IPCC Report”, chapter 3 179.
\(^10\) Portner and Roberts “IPCC Report”, Chapter 3 206
as six meters above the mean sea level.\textsuperscript{11} Without accounting for extreme weather, the sea level is expected to rise one meter above the current global average by the end of this century.\textsuperscript{12} This means in extreme weathers much of the waterfront in most coastal cities will be flooded. Other prediction models paint a much darker future, according to the National Research Council (USA) we have already released enough greenhouse gas to induce a 24 meter sea level rise.\textsuperscript{13} In previous changes in sea level during the end of the last Ice Age, we see a disturbing pattern of sudden sea level rise. This can be attributed to the negative feedback loop effect of ice releasing massive amounts of trapped carbon dioxide, thus inducing accelerated warming, this all feeds into the rapid rise in sea levels.\textsuperscript{14}

Climate change is expected to turn 163 countries around the world into significant sources of increased in outbound migration, induced by exposure to drought, food shortages and declining economic activity.\textsuperscript{15} New Zealand’s proximity with the pacific island states and South East Asia will become the prime recipients of many of these climate refugees.

\textsuperscript{11} “U.S. Climate Resilience Toolkit” accessed February 12, 2019 https://toolkit.climate.gov/topics/coastal/storm-surge
\textsuperscript{12} Portner and Roberts “IPCC Report”, chapter 3, 207
\textsuperscript{14} Harold Wanless, “The coming reality of sea level rise”, 1.
\textsuperscript{15} Portner and Roberts “IPCC Report”, chapter 3, 244.
DISRUPTIONS OF THE THIRD INDUSTRIAL REVOLUTION

Industrial revolution occurs when new communication technology, new source of energy and new form of transportation are adapted to manage, power and move economic activity.\(^\text{16}\)

The first industrial revolution was the convergence of the telegram, coal powered steam engines, and the locomotives propelled by the steam engine. The three technologies emerged to connect, power and move the economic activity of the 1800s. The second industrial revolution in the early 1900s saw the convergence of radio, telephone, petroleum and automobiles merged into a system that managed, powered and moved economic activity.

Each industrial revolution resulted in the adaptation of a new type of urban development. The first industrial revolution saw the rapid growth of cities, resulting in the overcrowded neighbourhoods for the working-class. The second industrial revolution saw the adoption of the automobiles, the widening of roads, changing the urban fabric to accommodate the flow of traffic. Adoption of personal transportation had also brought about the rise of the suburban sprawl. In both cases the cities were reshaped to meet the challenges and demands of their respective industrial revolutions. Finding that response to the third industrial revolution is essential in informing the form and function of the city of tomorrow.

We are on the cusp of the third industrial revolution, it is predicted to be the last of the great industrial revolutions.\(^\text{17}\) This time, the emerging technology that will be the catalyst for the third industrial revolution is the internet of things (IoT). Three internets will emerge in our era, a distributed internet of smart energy grid powered by renewable energy, an internet of communication, and an internet of driverless automobiles. These three internets will manage, power and move the economic activity of the third industrial revolution.

Unlike the previous two revolutions the third industrial revolution will be an entirely disruptive one. The first industrial revolution was developed organically after the Enclosure Act of in England displacing peasants off from their land, creating a cheap source of human labour for the nascent industries centered around fast-growing cities. The separation of manufacturing from the subsistence peasantry ultimately led to the industrial revolution,\(^\text{18}\) creating a large numbers of manufacturing jobs. The second industrial revolution is a continuation of the first, some menial jobs were replaced by more efficient assembly line and automation. The increase in productivity and new technologies took away some jobs but it

\(^{17}\) Rifkin, *The Third Industrial Revolution*, 5.
also created many others. The third industrial revolution will see most jobs from services sector to manufacturing be replaced by robots and artificial intelligence. This brave new world is the society and environment which the design outcome will be responding to.
The first two industrial revolutions have put everyone to work in an integrated and connected economic system. The society valued productivity to generate economic growth, this created the mentality of seeing human labour and capital as machines, toiling in factories and the fields. When liberated by machinery the people became operators, but they are still a cog within the system.

The third industrial revolution upends all the preconceived notion of society and economics, no longer will the market determine the flow of resources and information, because it will not be the biggest employer of human labour. The civil society where specialized services that require human capital will be the main driving force of the economy. Out of the legacy jobs, the ones that values creativity and compassion will be preserved, but they still need to integrate AI into their work processes. This will still cause massive unemployment, it is reasonable to be sceptical at the ability of civil society generating enough employment opportunities. Often called the “non-profit” sector, the idea that civil society being the main driver of economic activity contradicts economic norms of the past three hundred years. To this end, mass unemployment is a very possible vision of the future.

The first and second industrial revolutions have a vertically integrated economy of scale, the third industrial revolution will have a distributed economic structure built upon the smart internet of energy, information, and transport. The internet of Things provides a platform where individuals can be connected to a laterally distributed ecosystem, where they can share their goods and services with near zero marginal cost. A zero marginal cost economy has been in existence for years in the virtual world of the internet. Think YouTube or Wikipedia, producers exchanging entertainment, information and knowledge for free. With the Internet of Things, the barrier between the virtual and real world has been breached. In this economic structure, everyone is a producer, using 3D printers to produce goods at zero marginal cost, and utilizing bespoke apps mining for free information shared in the virtual world, generating unique services for others within this distributed economy.

The idea of a sharing economy upends the status quo of a profit-driven capitalistic system. How architectural space will change when our values are entirely different, how will the profit-driven commercial and residential space change? How will our perception on spatial privacy

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19 Rifkin, The Third Industrial Revolution, 266.  
20 Rifkin, The Third Industrial Revolution, 104.  
21 Rifkin, The Third Industrial Revolution, 270.
change when the idea of personal property changes into something more communally oriented? If the classic economic system is replaced is there any use for walling off performance spaces for the privileged few with tickets? These are all the questions that needs to be addressed architecturally in the final design.

This new socioeconomic paradigm forms the one pillar of this visionary future, the challenges of global warming forms the other. The design outcome of this project should be based on the premises stated above.
2.1 OVERVIEW OF VISIONARY THEORIES

There are two aspects to consider when designing a visionary scheme. The first is the society envisioned by the designer, how the socioeconomic dynamics of such a future society affect the habitual routines of the people. What are the newly arisen needs and desires of such place? All these becomes the basis for the form and function of the design, this vast scope in responsibility differentiates visionary design from other architectural designs. The totality in responsibility means the designs cannot only be an island of its own plugged into the unchanged existing infrastructure. The designers must also consider the transportation and other social and physical infrastructure in this new society, not just designing the tangible aspect, but also the intangible ones, such as forming an identity for the society and its people.

A constructed societal identity is the second aspect to a visionary design. The occupants cannot leave this visionary plan, because it forms their entire horizon, their existence is contained within this design. Thus the effects of the designed space and atmosphere on the individual and the wider society must be analysed too. These effects are often unintentional, and a by-product of the form and function dictated by the predicted needs and structure of the envisioned society.

The following is a selection of visionary architectural and design theories, they will be interpreted according to these two aspects of visionary design.
CONGRÈS INTERNATIONAUX D'ARCHITECTURE MODERNE.

CIAM was the first organized visionary movement in architecture. Their goal was to redefine urbanism, to refute what they consider as the gratuitous aestheticisms of the status quo in existing cities. Functionality will be the paramount driver in CIAM’s urban designs, this will create new ways cities are built to suit the needs of a newly emerged society.

In the 1920s, the world had just experienced the devastating result of mechanized warfare fought using outdated tactics, similarly it has parallels in the urban design realm. The rise of the urban bourgeoisie and nouveau riche demanded for a new way of life. With the advent second industrial revolution and the social blight it caused, the physical infrastructure of cities has become outdated, the software of the lives of the city dwellers have outpaced the hardware of the city. This will be a reoccurring theme among the other visionary designs.

Le Corbusier was instrumental in setting up the direction of CIAM in the pre-war period. The Athens Charter was the group’s earliest manifestation of their theory, it proclaimed a revolution is needed to save our cities. Pre-war CIAM viewed city design as re-sculpting the society, they recognized a paradigm shift in society and termed it “the mechanization of people’s lives”. This new pace of life has outpaced the structure of the old city, the solution proposed by CIAM was to reinvent an urban form that conforms to the needs of this mechanized society.

In the push to replace traditionalist cities CIAM came up with four primary functions, dwelling, working, transportation and recreation. These are the needs a city must fulfil.

CIAM considers health and wellbeing as the top priority in dwelling, sunlight must have deep penetrations into the floor plans. The needs of the people, and the efficient function of the city rises above the needs of the state and academia. Functionality not style needed to be the driver of urban design. Leisure and amenities contribute to the idea of a new age, urban life, green spaces, parks and green belts are important urban feature that breaks up the otherwise sculptural and pristine concrete towers and highways.

Work and transportation are inextricably linked, transportation is seen as the important linkage between work and dwelling. CIAM views the road network in old cities as narrow, congested and unfit for the age of

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23 Le Corbusier, The Athens Charter, 47.
mechanization. To improve upon these factors, a correct road width and road system should be designed based on the speed and dimensions of the automobiles. The work environment have undergone a complete revolution during the first and second industrial revolution. The social class of craftsmen have been replaced by factory workers used as human capital, emptying the countryside and congesting the cities. The contrast of the perceived image of the idyllic craftsmen to the exploited urban working class was the catalyst for CIAM to revolutionize how city should be organized. The connection between work and home is no longer normal, its distance must be reduced to a minimum.

The requirements in the four categories suggests that CIAM was extremely concerned with the rights of the urban poor. This formed a jarring contrast to the actual urban designs associated with CIAM by Le Corbusier, such as the Contemporary City for three million inhabitants, where individuality seemed to be sacrificed for uniformity, conformity and functionality. The strict segregation of functions and zoning, monolithic modernist aesthetics creates a sterilized environment filled with regimented people.

Post war CIAM started to have push back against the image painted by the rigid Contemporary City for Three Million. The Charter of Habitation was a rebuttal. The heart of the city was fully endorsed by the group. The heart or the core, is viewed as a place within the city where a sense of community is expressed. The theoretical paradigm moved away from the scientifically quantifiable qualities of pre-war CIAM. The idea of people to people relationship was further developed by Team 10, a group of new generation of urbanists that rejects the doctrinal orthodoxy of the older generations. They developed the heart of the city into a series of hierarchical relationship between people and the city, town, village, isolated houses. Peter and Aliston Smithson developed these associations into the idea of echoing the complexity of human associations in their urban designs.

The human-centric philosophy of Team 10, spelt the end of CIAM. Members of these new generations of architect and designers would form part of the Situationist International. As time passes, earlier ideas have become outdated, and eventually actively rejected. This is closely linked

29 Le Corbusier, *The Athens Charter*, 74
30 Eric Paul Mumford, *CIAM discourse on urbanism*, 215
31 Eric Paul Mumford, *CIAM discourse on urbanism* 202
32 Eric Paul Mumford, *CIAM discourse on urbanism*, 242
with the paradigm shift and social liberation movements in the 1960s, where the idea of a conformist society based on pure logic is unwelcomed.

CIAM have correctly identified the crises, hence why some of their influence exists in many city’s road networks and the towers in the park idea is being realized in newly built megacities in China. However, the identity of space and identity of the individual created form that space were never developed. CIAM’s thought processes and design philosophy did form the template for all later visionary movements to follow. Which is identifying an impending crisis within the society and sought an architectural solution.
The Situationist International was a very broad artistic movement and counter cultural movement. It encompasses politics, art and contemporary culture. Guy Debord’s the Society of the Spectacle that formed the foundation of the Situationist movement. The spectacle is the commodification of our society, where appearance and image matter more than reality, experience and truth. This pervasive idea has been infused into the very fabric of our society through capitalism and excess consumerism.

As a Marxist, Debord is naturally very critical of the capitalist system. Debord used Marx’s idea of Commodity Fetishism and applied it in an interpersonal scale. The commodification of society is also the commodification of interpersonal relationships. It is not merely seen as a crisis of society but also of a moral crisis of the individual. As he sees people within this spectacle trapped in an indentured servitude to capitalists morally impoverished and exploited as prosumers, producing for the sake of consuming. Debord believes the industrial revolution had guaranteed the minimal requirements for human survival in food and shelter. The necessity for survival in this capital dominated world has been relegated to a higher level of want. Which means consumers consume not because of the need to survive, they consume to improve their own image within the spectacle of the society and to consume for the sake of consuming. Debord calls this blurring of want and need as augmented survival. This frivolous social condition has isolated the individual from the society, from truth, from real experience. Whatever interaction you may have is mediated through storytelling and representations of the real thing. This people to people and people to environment barrier must be broken if the society is to be saved. Another aspect of this Situationist vision involves the mass adoption of automation in the economy. Through industrialization, the cyclical idea of time in the preindustrial peasantry society and have unchained them from the tyranny of nature, placing the working class into a society of desire, only to be enslaved by the capitalists. With the advent of automation, there is an opportunity to free the masses completely from the drudgery of work, which has been turned into commodity along with time in the industrial era.

To solve the problematic world identified by Debord, the situationist used two methods to redefine out cities, one is dérive a process of meandering

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through a city, using purely subjective interpretations of atmosphere to decide which path to take. Deviation is purely personal the experience is a manifestation of the subconscious mind of the people. The other is détournement, which is the process of appropriating existing design languages and twisting them to form a new style through collage and overlaying compositions.

One of the most important architectural ideas put forth by the Situationists is Unitary Urbanism. It opposes the bureaucratic rigid urban planning of modernist cities. Creating an urban dynamic that moves away from the whims of capital and bureaucracy towards participation and fluidity of the urban fabric.

Déjàtournement deals with the resources and materials the situationist draws upon to create their vision. It is believed by the Situationists that everything needed to be said have already been said. To create new forms of poetry, cinema or architecture, one needs to reuse elements from the past rearranging them in to figurative and literal collages.

The Situationist International is a rebellion against the status quo in society, art and architectural realm. The rigidness of modernism should give way to the fluidity of human experience. Debords warning of the Society of the Spectacle is even more relevant in the age of the internet, this problem will only exacerbate in the future.

Unitary urbanism centres around the two main ideas of the Situationists, dérive and détournement. The application of derive centres around the idea of Unité d’ambiance, an area of intense urban atmosphere perceived by the subject. It’s separated in to two aspects, soft elements like human activities, light, sound and time. Hard elements consist of shapes, size material of the city, the atmosphere and the physical environment respectively.

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40 Sadler, Situationist City, 117
41 Sadler, Situationist City, 70.
42 Sadler, Situationist City, 119.
**ARCHIGRAM**

The Archigram was an artistic and architecture movement of the 1960s, that sought to dismantle the apparatus of the modernist architecture.\(^{43}\) Both the Situationist International and Archigram sought to unseat the status quo of modernism. Unlike the Situationists, Archigram approached their solutions in a less ideological way. They do not seek to revolutionize society, rather to adapt architecture to the realities of their contemporary society, albeit an exaggerated version of society. As Peter Cook believed, consumerism is good and should be incorporated into architecture and the built environment.\(^{44}\)

The 1960s saw the beginning of the consumerism culture. International trade in the Bretton Woods system have flourished. With this reality as the context Archigram saw the need to update architecture from the stagnant modernist architecture to something more fitting for their time. They see the built environment as consumer products with design obsolescence. The transience in the lifespan of the building translates to what they termed the “situation”, where the temporary existence of the pedestrians, of weather, and of the passing of cars is as important in not more important than the buildings themselves.\(^{45}\) This is very similar to the Situationist idea of Unité d’ambiance’s soft, atmospheric quality of a city. A moment in time is valued more than the surrounding itself. “If it’s raining on Oxford Street, the buildings are no more important than the rain, why draw the building and not the rain?”\(^{46}\)

Architecturally, design obsolescence translates to modularity hosted on megastructures. The situation translates into the atmosphere created through the celebration contemporary pop-culture.

The vision formed by Archigram is one that seem to neglect the wellbeing of the individual. On the contrary the designs are shaped around the individual experience, seen through their version of post-capitalist society where fun, and hyper consumerism is the prevailing ideology. The celebration of consumerism might seem frivolous compared to the revolutionary ideals of the Situationists. It highlights the important aspect of Archigram that is valuable to this research. Which is, the process of adapting the built environment to an envisioned society, even though it has flaws. This the most important elixir to the burden of perfection in Utopian designs.

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\(^{44}\) Peter Cook eds, *Archigram*, 16.

\(^{45}\) Peter Cook eds, *Archigram*, 16.

DECONSTRUCTIVISM

Deconstructivism is an architectural movement, part of the postmodernist era. Deconstruction is a way of thinking originated from the works of Jacques Derrida, it’s an approach to philosophy that seeks to challenge the established institutions of philosophy.\textsuperscript{47} Derrida challenges the traditional relationship between words and meaning.\textsuperscript{48} Decoupling the word which he considers as symbol, with the thing, the object or the ideas it represents. All words are relative to each other, rather than being directly connected to the object or the idea it’s describing. This relative position is called the semantic place or setting of a word.\textsuperscript{49} The web of relations means truth is relative when ideas are being explained their meaning is also uncertain juxtaposed with related terms and meanings. This expands into the concept of heterogeneity; the existence and harmonizing of contradictory meanings, accepting the dissociation between everything.\textsuperscript{50} Nothing can be certain, and the pretenders who claim to know the absolute truths are just that, pretenders.

The idea of heterogeneous incongruity is used extensively in Deconstructivism, architecturally it challenges the status quo of Modernism, any ideas without plurality is totalitarianism,\textsuperscript{51} this is a critique of modernist homogeneity. In its quest eliminating the spatial hierarchies of the old, Modernism have polished architecture into finely sculpted forms that refuses to acknowledge the complexity and contradictions of our world. Post-Modernism and Deconstructionism by extension celebrates this contradiction. The of idea of binary opposites is used in Deconstruction theory to create spaces that are internally incongruent yet coherent, achieving spatial heterogeneity that does not conform into stable alignments or hierarchies.\textsuperscript{52}

Derrida believed that to convey the meaning of certain ideas, one must understand what it is not, as well as what it is. Through this internal inconsistency and contradiction, interesting and dynamic spaces can emerge. The incongruous space receives information from, and conversely influences its surroundings, bridging the gap between different functions and aesthetics of the periphery. This forms a coherent heterogeneous space. Relativity of space, of functions and of form echoes to Derrida’s discovery of semantic place for words, meanings and languages.

Everything is in a relativistic relation to each other, only such fluid spatial

\textsuperscript{48} Jacques Derrida, \textit{Deconstruction In A Nutshell}, 41.
\textsuperscript{49} Jacques Derrida, \textit{Deconstruction In A Nutshell}, 100.
\textsuperscript{50} Jacques Derrida, \textit{Deconstruction In A Nutshell}, 100.
\textsuperscript{51} Jacques Derrida, \textit{Deconstruction In A Nutshell}, 13.
\textsuperscript{52} Jacques Derrida, \textit{Deconstruction In A Nutshell}, 15.
and functional relationship can be relevant in a dynamic, multicultural future predicted by this paper.
HETEREROTOPIA

Heterotopia is term coined by Machel Foucault, “hetero” means different “topia” means place. It straddles between utopia and dystopia, not all good like Utopias, nor all bad like dystopia. Heterotopia thus is a different place from our reality, a different kind of space. A space Foucault describes as a mirror image, an inverted analogy of our own world.53

Foucault’s heterotopic space have six principles that defines it, these are outlined in his 1967 essay ‘Of Other Spaces: Utopias and Heterotopias”

1. Heterotopia are spaces of crisis, heterotopia of crisis and heterotopia of deviation. The former are spaces of crisis for the people who are in conflict with the environment or are living in a state of crisis. Heterotopias of deviation is where people who are in conflict with the social norms resides.

2. Heterotopic spaces have specific functions that are synchronized with the cultural trends and shifts in social norms.

3. Heterotopic spaces are able to juxtapose spaces and site in a real space that aren’t compatible.

4. Heterotopia has its own slice of time, once entered people forgo the traditional notion of time. Time can be accumulative and permeant or transitory and fleeting.

5. Heterotopic spaces have a system of opening and closing, making them accessible through ritual or enforcement, both porous and isolated.

6. Heterotopic spaces have relations to all space that are not heterotopias. It reflects real spaces in the forms of space of illusion, or it recreates real space in the form of space of compensation.

Space to Foucault relates to time, identity, function and subversion of the status quo. The medieval space of emplacement is outdated, the sanctity of space must be violated for society to progress. This de-sanctification of space is the progression of society. However, to Foucault, modern spaces are still governed by inviolable oppositions that are upheld by our institutions and practices, from public space to private space, from family space to social space, from cultural space to useful space.54 This link between function and institutionalized sanctity is the manifestation of established political and cultural powers. Enforcing its norms on the characteristics of space, and by extension the occupants of the space acquiescing to the whims of powers that be.

Identity forms space, but space also shapes the identity of the people that occupy it. Modern spaces to Foucault are like voids that we place things

and individuals in, which sanctifies a space to have an inviolable function, but instead we live in a set of relations that delineates sites which are irreducible to one another.  

Visionary designs to a certain extent are the real and tangible manifestation of heterotopia. Heterotopia itself is often used knowingly or unknowingly by architects to design society and spaces of the future or of an alternative reality as the case with Lebbeus Woods. Utopia and their modernist advocates have lost their appeal in our multicultural non-conformist world, the “Universal value” of today demands a reality as described by Foucault’s’ heterotopia.

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Foucault, “Of Other Spaces: Utopia and Heterotopias”, 3
2.2 PRECEDENCE EXPLORATION

The following section will investigate the existing architectural precedence of visionary architecture, and speculative architecture.

All architecture in a way is either visionary or speculative. Majority of architectural design processes works within the framework of what is probable, the separation of the two is in plausibility. Visionary is based on a set of most likely to happen scenario, while speculative explores the alternatives of the future. Visionary thus is more prevalent in architecture, while speculative is more prevalent in fine arts and cinema,\textsuperscript{56} where storytelling and an interesting narrative is preferred.

The most prolific periods for visionary designs spanned from the second industrial revolution of the early 1900s to 1970s. Visionary designs started to lose steam after the fall of the Berlin Wall and subsequent dissolution of the Eastern Bloc. Visionary design and speculative design need a collective sense of common destiny, and two competing world views emanating from a wider geopolitical environment, namely the Cold War contest between Capitalist West and Communist East. This great competition of ideologies pitted the working class of the West against the bourgeois, and the oppressed working class of the East against revisionist Communists rulers. It is from this dry tinder in ideology where visionary design can shine and flourish. With the end of the Cold War, the alternative communist world view has been thoroughly defeated by the Western Capitalistic system, this confidence in the status quo system has discouraged designers from seeking the alternative, coupled with the rise of individualism. Wholesale redesigning of cities died out. The resurging disillusion with the current geopolitical system since the 2008 financial crisis, and the imminent climate change crisis, visionary designs speculating on the future have again gained traction.

The aim of this section is to identify the main attributes of the precedence explored. Condense their methodologies in dealing with their respective problems or crises into manageable points to be used as design criteria later in the design stage for further interpretation.

\textsuperscript{56} Dunne, and Raby, \textit{Speculative Everything}, 4.
In the book *The Third Industrial Revolution*, Jeremy Rifkin identified the catalyst for an industrial revolution, it’s the convergence of three smart networks optimized by artificial intelligence. The distributed power network, the autonomous transport network and the internet as the communication network. These networks need massive infrastructural investment as a foundation to build upon. The construction of which, will be the tasks for two generations of people.\(^5\) This great infrastructural overhaul will provide the mass employment opportunities of semi-skilled labours that will be made obsolete by A.I. and automation, giving countries a buffer avoiding mass unemployment.

The manifestation of the infrastructural overhaul is the Rome Master Plan presented by the Office of Jeremy Rifkin. In which the city is reorganized into concentric circles or rings around a residential centre, surrounded by the commercial zone, with the agricultural zone as the outermost ring. The main idea is to separate the residential, commercial, industrial and agricultural functions. This is reminiscent of Ebenezer Howard’s Garden City concept, architecturally it was safe. It made no connection between the criteria set out by himself on the main attributes of the society of the future and the spatial qualities of the functional spaces in the future.

The residential involves the retrofitting of existing commercial historic centres to counteract the depopulation of city centres. The middle industrial/commercial ring will provide ample jobs and is well connected to the residential ring. The outermost ring is the agricultural zone, where ecologically friendly farming method is employed to reduce the carbon footprint of the farming industry. The agricultural produce feeds the local region, supplying exclusively to Rome.

There are four pillars to the Rome Master plan

- A smart network of renewable energy
- Building as powerplants
- Hydrogen power storage
- Smart and integrated transport infrastructure.

Such master planning is just an economic feasibility study. The only architecturally noteworthy initiative was to hollow out the interior of the existing historic centre. The project mainly focused on the economic and power generation efficiency of the city, neglecting the human aspect of the society. Retrofitting the historic centre is used to reduce the impact of mass unemployment, rather than any nuanced architectural move to create a new form of architectural space of the future. Seeking an alternative to the Rome master plan is needed to design a speculative future driven by architecture.

Fig 2. 1 Concentric rings with red as residential, blue as industrial and green as agricultural.

Fig 2. 2 Hollowed out historic building.
Constant Nieuwenhuys’ New Babylon is one of the examples of architectural work representing the philosophy of the Situationist International.

New Babylon is a megastructure project, designed to span the continents and eventually cover the entire world in a multi-layered cityscape. The structure is raised above the ground leaving the ground level for automobiles. The theoretical premise is to have an alternative replacement for the existing urban fabric. The outdated city to Constant is too focused on production, work and bureaucracy, the stance against cities being viewed as an efficient machine of production is opposite to the Rome master plan of proposed by Jeremy Rifkin. This divide exemplifies the difference in approach in visionary designs.

New Babylon is a city of endless play, such future is realized through mass automation in a post-scarcity society. The structural language of New Babylon is extracted through the psychogeography maps of dérive. Multiple nodes scattered around the structure, connected through pathways. Within the structural frame work Constant sought to redefine architectural space and with it the urban fabric. To achieve this redefinition of space Constant used colours and lighting to create an ever changing ever shifting interior atmosphere. From within the structure all the

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58 Wigley, *Constant’s New Babylon*, 131

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occupants can see is endless man-made space and cityscape.\(^6^0\) Constant hoped to portray the entire stricture as a man-made landscape, replacing nature, regaining control over the right of perception of the urban dwellers. The importance of the individual occupant’s perception of the space hinges upon the fact that New Babylon is an anti-modernist statement, it rejects the rigid established town planning.

New Babylon gives the individual the power to change a modular city, presenting a vision of the future through the perspective of the individual. The representation of the designs focused too much on the psychophysical perception of the atmosphere, it lacked the character, it lacked life, it lacked a sense of the space being lived in. Ultimately, it lacked the human context. Neglecting the need to represent how people lived and the culture at the time is why many visionary designs were so sterile, even with the rhetoric of utopianism, it often results in a dystopic vision.

Archigram’s answer to the dreary utopia is to design and speculate the contemporary culture of the future as well as the architectural space. Their approach is much more playful, filled with what life of the future could be, treating architecture not only as a built medium, but also as representation of popular culture. There are two aspects to most Archigram projects, one is an integrated city-wide infrastructure, the other is the cultural atmosphere of the space. The Plug-in City by Peter Cook epitomized the

\(^6^0\) Wigley, *Constant’s New Babylon*, 10.
idea architecture as a commodity, the vast megastructure both support and act as built-in infrastructure/transport system for the city. The structure plays host to the modular spaces with designed obsolescence. The most frequently replaced space with a short design life span, such as apartments are placed on the top level. The more permanent spaces are located near the ground level of the structure,\(^{61}\) robotic cranes built on rails roam the vertical city adding and taking away modules. The Plug-in City approaches their visionary design not through master planning, it’s done from the prediction on what the individual lives of the future might entail, which is the celebration of consumerism resulting the commoditization of architecture. The industrial modular aesthetics gave the project the always complete, but never finished look.\(^{62}\) The Capsule designed by Warren Chalk adds more layers of detail to the world of Archigram, exploring the likely scenarios of life in an Archigram city. Together, the Plug-in City and The Capsule investigate the world of Archigram based on the central tenet of commoditization of architecture. The perspectives from two opposite ends, creates a harmonious vision of an alternative world.

\(^{61}\) Peter Cook ed, *Archigram*, 41
\(^{62}\) Peter Cook ed, *Archigram*, 42.
The second relevant aspect of Archigram is its speculation on the culture of future societies, this is most evident in the art style the project uses. Entourage the portrayal of certain mood, bright colours portraying the playful society of the future where capitalistic desires reign supreme.

Instant City was one of the Archigram projects that is centred around culturally enriching a place using popup and temporary exhibitions. It was a multisensory experience exhibited audio, visual techniques and advertisements. Instant city represents the imperfect speculations of the future. Gone are the idealistic but ultimately unrealistic visions of utopia, this future is simply an extension of our current values, albeit with the dial turned up to eleven. The design philosophy of instant city concentrates on spatial atmospheric generation, “software” as Archigram calls it. The idea of the software of the city being the atmosphere and culture, was referred to as the spirit of the city in the Archigram Living Arts Magazine in 1983. Modern city planning lacked this spirit or consideration for urban culture, devolving into an exercise in resource allocation and fulfilment of density and regulation requirements.

The spirit of the city in a way is the collective culture of the society, a form of identity. This form of identity transcends the societal realm, and seeps into the constructed realm of architecture, Archigram projects are

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63 Peter Cook ed, Archigram, 88.
64 Peter Cook ed, Archigram, 20.
poetic machines used to fight the status quo and present a window into an alternative lifestyle. The thought process is very clear, the central tenet of Archigram is the commoditization of architecture and a celebration of hyper consumerism. The industrial aesthetics of the designs reflects that visually, and the speculated alternative society reflects the hyper consumerist culture.

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Deconstructionism is not entirely visionary or speculative. However, they do present an alternative to the status quo. The Manhattan Transcript was a theoretical project by Bernard Tschumi that translates a story, presented as the transcript, into a series of architectural drawings, constructed using points, lines, planes and solids, the object (the building), the event and the movement of the character. These are the components of a story but is also the building blocks of a city. Space, according to Tschumi is both conceived and perceived. The subjective perception and the program becomes the characteristics of the space, forming the relationship between the identity of the space and the identity of the people occupying the space.

In the drawings of Manhattan Transcript (fig. 2.2.17) the spatial identity is applied to an entire city. The first drawing is the event which gives the following drawing of the city character in the form of shadowy atmosphere, at the location where the event is taking part. The last drawing in the sequence maps out the temporal and sequential place of interest within the city.

Tschumi raised the idea of programmatic sequence in architecture and the term “Event Space”. Space is defined by the event taking place within it, the sequential part is the relative position of the observer juxtaposed against a backdrop of the architectural space, where architecture is a series of inhabited events. Event space creates three types of relationships between the event and the space. The first is the indifferent where the space and event is independent of each other. The second is reinforcing, where the event and space complement each other. The third is space and event that actively work against each other.

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The first type of event space is frequently represented by the modernist functional space. The multipurpose space of today rarely have much connection to the event that it occupies. The more interesting types are the second and third, in which a feedback loop exists, this connection between event and space gives it identity and character. As evident in Tschumi’s Parc de la Villette, the sequential axial movement of the people is coincided with the placement of architectural elements, turning an architectural experience into a curated narrative. The project is made up of point, lines and planar elements, it’s a physical manifestation of the Manhattan Script. Event converge on the architectural folly presented as point element at the intersection of a rectangular grid, which is then broken up by the circulation elements into a more organic pattern, ending with a system of planes which are unprogrammed spaces for the public to take over. The design methodology of Parc de la Villette has its internal logical consistencies despite the irrational forms, The first step is to visually represent the size of the areas needed for different functions diagrammatically, then the diagrams is visually broken up to and conform to a new order of grids. Visually in a metaphorical sense deconstructing the form and data grafting it into a set of rules.

Deconstructionist designers like Tschumi explores the world in a formalist oriented process, presenting the idea of allowing the event to give the space a form of identity is very important to this research project.

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69 Tschumi, Architecture Concepts, 119
However, Tschumi’s methodology lacks a coherent vision to build an alternative society. The lack of vision is evident in the absence of one single speculative point about an alternate or a future society. Designers like Lebbeus Woods uses the formalist approach to generate otherworldly forms, what set Woods apart from other deconstructionists is his grand vision, and vast scope in his designs.
In the projects of Radical Reconstruction for Sarajevo, Havana and San Francisco, Lebbeus Woods used the opportunity of destruction caused by war, economic stagnation and earthquake respectively to reshape the city. The idea is to use the metaphor of healing a wound to patch up damaged buildings, using the analogy of healing wounds turning into scabs then scars to describe the gradual process of reconstruction and expansion. Lebbeus Woods views walls not as lines or a boundary dividing the interior and exterior space, he sees walls as periphery zone, which he dubbed “free spaces”. The free space turns a two-dimensional wall expanding it into occupiable three-dimensional space. These resultant spaces intrude into the existing buildings while also cantilevers into the streets. According to Lebbeus Woods, the newly created space is for people from all social classes who finds the old hierarchical city too oppressive. The ownership of such space belongs to whomever is occupying it. This echoes the spirit of the city and the societal identity that formed Archigram’s Instant City, albeit at an individual level.

The occupants through performing the function of the space defines the usage of space, and the identity of it. Such space are spaces of crisis since most that occupies it will be social outcasts. Most of Woods’ design centres around new structures growing out from the older existing structures, reinterpreting the forms of the older building yet retaining certain design motifs of the host building. These free spaces will be connected digitally, with the spaces serving as electronic and information nodes. The irregularities of these free spaces are due to Lebbeus Woods’ objection to the idea of form follows function. Where he argues that it is nonsensical to claim architects create spaces according to the intended program, when most architectural space are rectilinear forms that are prescribed a function. A rectilinear volume labelled a lecture hall is an example.

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71 Woods, Radical Reconstruction, 17.
Because of this labelling, the student inside must follow the social norms of not speak out loudly or object the person of authority. In this sense free spaces is not only a geometric rebellion against the cartesian volume of architectural space or on a larger scale the rectilinear street patterns of a city, it is also a rebellion against existing rules and regulations of the current society, thus forming the anti-cartesian and anti-orthogonal architectural spaces for outcasts.

The attempt to diverge from the orthogonal urban grid of existing cities present an interesting insight into the feasibility of expanding our understanding of space. It adds another cartesian direction when the X, Y, and Z axis is already occupied.

Modernism sought to overthrow the obsolete spatial hierarchies of architecture, creating new democratic spaces of homogeneity. Postmodernists rejects the homogeneity of utopianism, and promoted heterogeneity in architectural space. To Deconstructionists, this new form of space is not generated through proposition. Instead it’s created through destabilizing the existing forms, using grafting technique to insert themselves into the existing context. The relationship between the new form and the existing surrounding context according to deconstructionists is one of incongruity and intensive cohesion. It also informs the newly created space, creating an everchanging metaphorical bridge across the site linking the extremities.

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72 Woods, Radical Reconstruction, 23
73 Kipnis, “Towards a New Architecture” Folding in Architecture, 57.
According to Jeffery Kipnis there are two types of Deconstruction architecture, InFormation and DeFormation. The former seeks to create an internalized incongruent architectural system within a monolithic massing. The latter seeks to produce new aesthetic spaces by grafting abstract forms that cannot be decomposed into simple planar elements. The difference between the two is very nuanced. DeFromation emphasises on the aesthetics of form and the visual exploration of new spaces, decoupled from essentialist functions and the shackles of Platonic, Euclidean and Cartesian geometry, InFormation on the other hand favours the institutional form where the programme of the event-space drives the form and the arrangement of space.

An example of InFormation architecture is Le Fresnoy by Bernard Tschumi, where an irregular pathway weaves through a set of pragmatically determined existing spaces, contained in a modernist roof structure. Tschumi’s design uses the deconstructionist idea of collage to reprogram the existing derelict buildings, the elevated walkway presents another perspective meandering between the buildings. Providing a metaphorical view from a higher dimension, one dimension of time through the representational three-dimensional space. The movement of the occupant through the walkway changes the geometric perception of the forms.

Nara Convention Hall by Bahram Shirdel is an example of DeFormation design with the folding action applied to the entire structure, the Western façade represent the ideal form, as it houses the programmed space. The Eastern façade is the articulated form as the envelope folds into the surrounding landscape. The skin envelopes three masses programmed to be the main performance space, these three spaces hovers within the envelope creating interstitial and residual spaces between themselves and the envelope of the building, the floating mass is inspired by the Buddhist statues in Todai-ji Temple. The statues represent alive in the spiritual sense, and the floating mass are alive in a programmatic sense.

74 Greg Lynn, Folding in Architecture, 59.
75 Greg Lynn, Folding in Architecture, 67.
76 Greg Lynn, Folding in Architecture, 67.
Fig 2. 24 Le Fresnoy by Bernard Tschumi, the existing functional space juxtaposed as the background against the blue circulation path that “uplifts” the observer above the plane of existence, changing the perspective of the yellow spatial forms. All spaces are then housed within a monolithic form.

Fig 2. 25 The gradual decaying of form can be seen, as the building folds itself to the ground.
3.0 METHODOLOGY

To fully understand the two architectural objectives, and the subsequent design section. The ideas of constructed social and spatial identity, and the foundations of the formalist exploration needs to be visually explained.

3.1 CONSTRUCTED SPATIAL AND SOCIAL IDENTITY

Space, program, event and people form a symbiotic relationship, each helps to define the next and the latter reinforces the former. This cyclical relationship connects the built identity of the space and the formed identity of the people. The link between identity of the society, people and of space is explored by Michel Foucault’s heterotopia. Heterotopic spaces are marginal spaces of crisis for the outcasts to construct their own identity, in turn their occupation shapes the character of the space. The government and corporate business interests designs the spaces we occupy, giving us false illusions of freedom. In the science fiction anime Ghost in the Shell, there is a three-minute-long intermission scene, consisted of a sequence of evocative images portraying a fictional New Tokyo inspired by Hong Kong. The scene is non-sequential where time is irrelevant. The sequence depicts a series of scenes of a chaotic city, where people where seen as microorganism living in the bigger organism of Tokyo.

The city and its people as depicted in the Ghost in the Shell have an identity crisis. The signs are in Chinese, but the city is in Japan. The protagonist who is a cyborg with a constructed body sees another body of the same model occupied by another person’s consciousness. Shots of faceless mannequins with reflection of people walking by, asking the question, how are we any different? The sequence depicts an entire city and the lower class of the society having a crisis of identity. To Foucault this is a society in crisis, and the spaces they occupy in their seemingly free lives are the marginal heterotropic spaces. The city in Ghost in the Shell exists in a layered dynamic state of change, the people can upload their consciousness into the wider city network. This imbeds the citizens as a part of the city, zipping back and forth like electric currents. Heterotopia seeks to break down the constructed barrier between class, race and gender merging it into one everchanging space of being, our city.

To construct this identity of space and society, the methodology of Tshucmi’s Manhattan Transcript is used. The screenshots from the intermission sequence from the Ghost in the Shell forms the story or event, the movement is interpreted from the screenshots, with the final product

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77 Even Puschak, “Ghost In the Shell: Identity in space” YouTube Video, 8:11, 17 September 2015, https://www.youtube.com/watch?v=gXTnl1FVF8w&t=368s.
being the abstract sample object. The methodology of Archigram collage was used to generate a composite image from existing resources, marrying atmosphere and object into one.

The scene chosen is one of the panning shots, where the audience point of view moves along with on a predetermined trajectory, with objects near and far moving from the right of the frame to the left.
Fig 3. 1. The first image is the screenshot from the movie, the camera is moving from left to right. The second image is the path of the camera moving along the cityscape, the four oval shape represents the field of view at different intervals of the panning shot, the last image is a collage of the ambiance and atmosphere of the four field of views, the shape is extracted from the sectioned buildings and bridges within each of the four ovals.
Fig 3.1.2 Progression of geometries from one-dimension to the fourth dimension.
DEFINING THE HIGHER SPATIAL DIMENSION

One of the objectives of this research project is to break three-dimensional urban fabric of our cities. Today’s cities are still dominated by pseudo three-dimensional forms, which is essentially extruded blocks made from two-dimensional master plans. Such aim is in lockstep with the idea of heterotopic spaces. A place that is a different dimension from our own. A parallel universe of being. A space of mind curated by the occupants. To represent this extradimensional space parallel from our own, a representation of it must be constructed in our own three-dimensional realm.

In order to fully understand the spatial exploration in Design Part One of this search paper, a basic understanding of the higher dimension is needed. We live in a three-dimensional world plus one dimension of time, a point has no dimension, a line is one dimensional, a square is two dimensional and a cube is three dimensional. This is the limit of our understanding; any higher dimensions is cannot be represented in our three-dimensional world.

To represent the fourth dimension a metaphorical approach must be taken. To understand the fourth dimension, one needs to understand the relations between one, two and three-dimensional geometries. When you cut across a one-dimensional line, the cross section is a zero-dimension dot, cut...
across a two-dimensional square, you have a one-dimensional line, cut across a three-dimensional cube, the resultant cross-section is a two-dimensional square. This establishes the rule that a higher dimensional geometry will always have a lower dimensional cross section. The cross section can also be viewed as a shadow projection from the higher dimension.

The form of a hypercube can be seen as a shadow projection of a four-dimensional geometry in our three-dimensional world.
Why is the hypercube a representation of a four-dimensional geometry? We must look at it from the lower dimensions for the answer. If one takes a point move it in the X axis and connect the two the result is a one-dimensional line. If that point is moved in the Y direction at 90 degrees, a two-dimensional square will appear, and if that square is moved in the Z Axis at 90 degrees, the result will be a three-dimensional cube. All movements up until this point have been at right angles to each other, so to add another dimension we must expand the geometry 90 degrees to another axis, but the X, Y and Z axis have already occupied, the only solution is to expand the cube in all directions, this creates the hypercube. However, this is not a four-dimensional geometry because in order for that to be true, all corners of the hypercube must be at right angle with each other. Such shape cannot exist in our dimension. The only conclusion is that the hypercube is a shadow or a representational shape of the four-dimensional geometry in our three-dimensional world.

Henceforth, all references to four-dimensional geometry refers to a representational geometry in our three-dimensional world.
Fig 3. 1. 8 Two-dimensional square moved in the Y axis, creating a cube.

Fig 3. 1. 9 A cube pulled on all axis creating a hypercube.
4.0 DESIGN PART ONE

The following section will form an architectural language based on the influences of the visionary designs and precedents. It will be organized into three aspects of architecture, space, circulation and façade. The resultant architectural language will be applied to an appropriate site. This will provide concepts for the formalist objective of the research project. The atmosphere objective of the project will be presented as final rendered designs.
4.1 SPACE EXPLORATION

The spatial exploration will focus on how space is created, specifically how the representation of the fourth dimension can be visualized within our three-dimensional universe. This is purely a formalist exercise where space is imagined irrespective of the function or site.

The first interpretation of space is done through physical model making, where space is seen as a Euclidean solid object, separated from the linear and planar elements of the representative façade (figure 4.1.1). The extraction of the spatial element allows it to be manipulated and viewed in isolation. Space in architecture have often been an empty state of being, as alluded by Lebbeus Woods, being labelled for a particular function without considering the connection between the formalist quality of space and its function.

The next step in reinterpreting space came when the idea of a force is applied. (figure 4.1.3) When tension is not applied, the pieces of cardboard lies dormant, when pulled apart the tension in the fishing wires forces the cardboard into place and creates a negative space between them. This is a reverse take on Lebbeus Wood’s idea of deconstructing a status quo structure and creating his own space by expanding into it.
The idea of negative space is further explored three dimensionally. (figure 4.1.5) The dots were plotted on the surface of the cuboid, creating a pattern on the surface when is then act as a section plane cutting into the geometry creating cells. When the cells are pulled apart, the central negative space give way. When highlighted it echoes to the formalist language of the Dérieve psychographic maps.
How do we represent a higher dimension if we cannot comprehend its geometry? The answer can be found if we look at a hypothetical lifeform that exists solely in the two-dimensional realm. How would they perceive a three-dimensional object? Figure 4.1.9 exhibits the scenario where a two-dimensional creature fixed to the X and Y plane of existence might perceive a sphere moving through their two-dimensional realm. The two-dimensional creature can only see the cross section of the three-dimensional object which is just a one dimensional line (thickened for clarity), and as the three dimensional object move on its Z axis, its cross section changes in size in the two dimensional realm.

![Figure 4.1.9](image1.png)

*Fig 4.1.9 Point of view of the two-dimensional life form indicated by the arrow.*

![Figure 4.1.10](image2.png)

*Fig 4.1.10 Only the red sectioned part is visible to it.*

![Figure 4.1.11](image3.png)

*Fig 4.1.11 The cross-section of the sphere expands.*

![Figure 4.1.12](image4.png)

*Fig 4.1.12 The sphere sinks deeper into the Z axis.*

![Figure 4.1.13](image5.png)

*Fig 4.1.13 The cross-section from the two-dimensional creature's point of view shrinks.*

![Figure 4.1.14](image6.png)

*Fig 4.1.14 Sphere almost completely through.*
After the fundamental relationship between a higher dimension and a lower one is established. The question of how to represent the fourth-dimensional object within our three dimension arises. To a two-dimensional creature the appearance of an incomprehensible three-dimensional sphere is that of a one-dimensional line that changes length. Then to us three-dimensional creatures, a four-dimensional object moving through our plane of existence must take the appearance of a three-dimensional object expanding and contracting in size. Growing from nothing and then disappear into nothing.

The first attempt at exploring expansion of space comes with the growth and separation of two structural truss. Growing organically expanding, creating space with a clear centre and outstretched appendages.

In figure 4.1.15, the second-generation truss has a mutated appendage, which is then favoured for development. Resulting in the top truss merging into the lower one.

The fourth generation (fig 4.1.16) consolidates on the previous generation. While the fifth generation pulls the growth in the X axis.

The last generation (fig 4.1.17) expands the nascent central space of the fifth generation, generating a space at the centre of the structure.
The exploration on the representation of a fourth dimensional object passing through our three-dimensional universe continues with the methodology reversed. Previously it is mentioned that a two-dimensional creature views the passing of a three-dimensional creature through their universe as an expanding and contracting one-dimensional cross section. However, things are much different from the perspective of the three-dimensional spherical creature, since it can move in the Z axis, the sphere can rise above the plane of existence for the two-dimensional creature. From above or below the three-dimensional creature can see the inside of the lower dimension creature.

Within our own realities, without attempting to imagine the form of a higher dimension. Simply by seeing time as a higher dimension, an organism can exist in a higher dimension and look “down” into our own dimension. To this organism time is not a linear dimension that goes in one direction. It perceives time as nonsequential, looking at us from their perspective, every moment of our lives will happen at the same time and forever. From this creature’s perspective we are always being born, always graduating university, always dying. Thus, time does not necessarily have to be only about a sequence of event arranged in a linear fashion, series of event can be circular and cyclical. When viewed from a “higher dimension” time can be just another physical dimension encompassing a three-dimensional space creating a pseudo fourth dimensional situation.

When time is added as a physical boundary, how will space occupy and expand within it as a fourth-dimensional object would act. How will they move through our third dimension, expanding and contracting out of existence? The following spatial models visually present how can space exist within a physically contained boundary of time. The boundary of time is represented visionally by the cubical form.
Expansion of space within a metaphorical temporal boundary is combined with the already explored idea of cutting through an object to obtain a lower dimension cross section. What are the methodologies of expanding space within a metaphorical fourth-dimension temporal boundary?

In figure 4.1.24, the individual spatial element within the metaphorical temporal boundary is created by the representative cutting lines. In our reality the lines cutting through the cubical representation of the temporal boundary, should simply yield a two-dimensional geometry. However, in this representation of the fourth dimension, the cutting lines are linked together, at the ends of each cutting line is a single point, these point clusters then find the nearest neighbour to form a plane. Several planes form the three-dimensional geometry within the temporal boundary. This resolves the logical impossibility of creating a four-dimensional object.
4.2 CIRCULATION EXPLORATION

The following section will construct an architectural language from the circulation aspect of architecture.

Circulation is a way for connection and movement. According to the design philosophies of Bernard Tschumi, circulation provide a way to represent movement in architecture. Through the change of perspectives one can play with the perception of the surrounding spaces. Circulation is not merely a connection between two points or spaces but is also a bridge that spans the temporal chasm of different plane of existence. Connection in this sense is a pathway through time and space, where the wanderer can step outside of the limitation of our dimension and observe space and objects from a new perspective. Circulations or their physical manifestations like corridors should not be a rectangular leftover space between the main functional spaces. In order to allow the observer to step outside of the plane of existence circulation must be an independent structure, connected but also divorced from the rest.

How would one move through space? based on what logic? The answer is too premature to at this stage. The Dérive psychogeography map provides the criteria for meandering forms, albeit with very subjective perceptions.
To visually comprehend such space of circulation and movement, the idea of bridging across time can be the starting point. Points of interest are hosted onto temporally defined planes. Then lines of connection go through the relevant points forming a connection across time and space. In figure 4.2.2, this metaphorical bridging of space and time is represented using maps of Aotea Square from 1940, 1959 and 2016. These maps represent individual temporal planes of existence. The points of interests are the discontinuities of selected building footprint on the site. From the elevation view, the clear coalescing of the form from small to large is time progressing upward from 1940 to 2016. The appendage connections are smaller in the 1940 map compared to the 2016 connections. This is because the buildings on the site in 1940 has a smaller building footprint compared to 1959 and 2016. The clear bulge between 1959 and 2016 was caused by the redesigning of Aotea Square where the site was temporarily turned into a building site without any discernible building footprints.
The next phase is to expand the idea of bridging across temporally defined planes and explore nontemporal representations. In figure 4.2.4, a series of models that grew from a two-dimensional mesh to a three-dimensional grid structure. The planes that dissect the model represents different planes of existence, on which points of interests are plotted, these points of interest that dwells on the same plane are arranged in a circular relationship. These points of interests are then connected with points that are dwelling on other planes, creating a complex binary relationship matrix. With enough of these relationships, planes can be generated to form spaces acting as nodes among the dozens of connections. If a person moves along these avenues of connection, that person will realize the connections themselves are not beholden to the spaces. No longer are the corridor residual spaces, they help to define the main spaces. As alluded by the Deconstructionists’ notion of residual spaces being the centre piece of the architecture rather than leftover spaces.
Fig 4. 2. 6 Linear connections

Fig 4. 2. 7 Circular connections within the same plane of existence.

Fig 4. 2. 8 Bridging the points of interests, creating solid forms.
The next set of form exploration deals with how a set of existing circulation paths would react if an external force is applied. When forces are applied space is formed. These forces are applied through the visual scripting program of Grasshopper.

Fig 4. 2. 9 Linear connections.

Fig 4. 2. 10 External forces applied on the boundary

Fig 4. 2. 11 Direct force is applied.
Fig 4. 12 Force applied from one hemisphere.

Fig 4. 13 Inward pressure combined with outgoing forces.
4.3 FAÇADE EXPLORATION

The façade is an important aspect of the design. It links the existing architecture with the new spaces of the future. The aim for this section is to generate an architectural language and methodology that can morph existing façades into a new formalist language that suits the criteria demanded by the spaces of the future.

The main influence of the façade system will be that of Lebbeus Woods, exploring in-between spaces generated through the expansion of walls. The first set explorations deal with the metamorphosis of the façade by introducing entropy. Allowing the imagined façade to gradually descend into chaos (figure 4.3.1), this collapse of order wraps around the façade and penetrates into the back panel of the model. The act of intrusion forces the two back panels apart, compartmentalizes the spaces between.

The second model explores the idea of a regular façade system. With closed ends eventually breaking free of the constraints on the top left corner, represented by the open-ended irregular grid attachment.

Fig 4.3.1 The Façade system goes from order to disorder, right to left.
Fig 4.3.2 The planar elements forces the back panels apart creating space.
Fig 4.3.3 Breaking the confines of the existing façade.
Fig 4.3.4 The regularity is broken as the pattern reaches the top left corner.
The idea of a façade metamorphosis continues in figure 4.3.5 where the grid pattern of the existing façade is morphed into two planes. The regular grid structure of the façade is commandeered to create a new structural pattern to support the newly cantilevered façade. The horizontal extension contrasts with the vertical plane of the old façade. These new horizontal elements serve as the elevated ground and pseudo sky, in-between exists a space for the outcasts.

In figure 4.3.6, a foreign object was inserted into the façade of the existing building, creating a matching negative void in the old structure. This is a more confrontational way of creating space.
This set of models explores the process of simplification of the Renaissance revival façade of the Auckland Town Hall. The first model (figure 4.3.7) extracts the main architectural element of the Western façade, windows, arches and columns are the main characteristics of the façade. These architectural elements are then simplified and manipulated in figure 4.3.8, the methodology of the manipulation is to give the two-dimensional architectural elements on the original façade a third dimension. This teases with the theoretical idea of a wormhole, if a portal exists in a two-dimensional universe it will simply be a two-dimensional circular hole. Imagine cutting a hole on a piece of paper, but if such portal were to exist in our three-dimensional universe the portal or hole will be that of a sphere.

To break through the Z axis on a piece of paper, a two-dimensional hole has to be cut. This hole represents the highest physical dimension that can exist on that paper. Similarity, to break out of a three-dimensional universe, the portal must be the highest physical dimension that can exist. In this case, it is a sphere. The manipulation of the windows involves giving them a thickness and expand the two-dimensional idea of a hole on the wall into a three-dimensional portal, leading it to become a higher dimensional geometry.

The last model (figure 4.3.9) depicts the situation where the fabric of spacetime is warped. Due to the fact the models are hosted onto the spacetime fabric, the objects themselves are distorted. The red represents the functional spaces created by the distortion of the spacetime. The blue objects residing within the red space represents the opening leading into the spaces, and the green serpentine element is the circulation that threads the other elements together.
Fig 4.3.7 Western façade of the Auckland Townhall.

Fig 4.3.8 Two-dimensional elements extruded to create a third dimension.

Fig 4.3.9 The fabric of space-time which the elements are hosted on are further abstracted.
5.0 DESIGN PART TWO

Hitherto, the formal exploration has yielded adequate amount of architectural language to fulfil the first objective. Which is to find an alternative architectural form to the existing two-dimensional urban fabric. Further investigation into the needs of the spaces of the future is required to complete the objective.

The second objective deals the representation of the atmosphere within the grim reality of the climate crisis, and a post-capitalist society. The basic premise was exploring in section 3.1, the outcome will conclude with the final presented design during the examination.

The following section will deal with the first objective. The site of Aotea Square has been chosen. In addition, there are two main points of interest regarding the future of space.

- What are the characteristics of the spaces of the future? These will provide the general functional requirements for the spaces.
- What are the characteristics of the society of the future? These will provide the rationale on how spaces of different function are put together.
5.1 FUTURE OF SOCIETY

This section will define the characteristics for the spaces and the social structure of the future. The final design will be a direct response to these characteristics.

Behaviour and the structure of the society go hand in hand with how cities and spaces are formed. The individualistic society of America gave birth to the car friendly suburban sprawl. The collective societies of East Asia gave birth to tightly-knit living conditions. While the socialist societies preferred to house the proletariat in mass utilitarian apartment complexes. When the allure of communism fell, the people began knocking down the walls of street level apartments to open family businesses changing the character of the street. Cities and the spaces in it will adapt to social change stemming from the grassroots. Conversely, top down forceful changes to the city structure will in turn affect the society.

The Third Industrial Revolution will see marginal cost of production drop to zero. If things are free to produce, then the supply will massively outstrip demand. This will fundamentally change our perception of work. In order to understand a post-scarcity world and how to get there, the difference between post-scarcity and post-capitalist world must be understood and differentiated.

Post-scarcity is the end goal, where marginal cost is truly zero, and a functioning society exits without the greed of capitalism, or the selfish need to seek reward for being a pioneer. Post-scarcity is a true communist society, for this society to function, we as a species need to change our entire mindset. The successful of our species to attain post-scarcity society depends upon a transitional period. This transitional period is the post-capitalist era.

Post-scarcity is a form of utopia, making the transitional post-capitalism era a form of heterotopia. This definition fits the aim of this research project, as outlined in section 1.1 of this document.

To understand a functional Post-capitalist society, one need to understand that wage-earning jobs is simply a way to redistribute wealth, at the cost of innovation. States for the sake of social stability, is a passive enabler to foster the outdate idea of wage-earning jobs.

The current economic system is a real-life Truman Show. The state and the capitalists collude to stifle automation and keep the inefficient menial jobs from dying out. The state gets the benefit of a stable society and a low unemployment rate, the capitalist gets to farm their employees as loyal consumers. This cycle needs to be broken if humanity is to advance into the age of post-capitalism. Universal Basic Income will provide the cushioning effect to prepare our society for the transition. The society also need to rethink work, if everyone gets a monthly amount of money, the incentive to work will come from the sharing economy. Redefining the entire idea of work. Today’s wage-earning job is non-modular, worker-
must arrive at the company and finish their tasks at a scheduled time, so worker-B can continue downstream in the assembly line.

The future of work will be decentralized and modular. Each worker can take things from the collective commons, use it, add to it, and upload it back into the sharing economy. This modularity of work means the idea of a centralized workplace will be outdated, replaced by a holistic form of living. The idea of living within a community becomes ever so important, because the online nature of modular work limits physical interactions between people. This combines work and living, two of CIAM’s criteria for a healthy city into one.

With the implementation of the Universal Income and a shared economy, people will have more time in pursuit of leisure activities as part of the sharing economy. Cultural events such as concerts or stage shows will be open to the public, the idea of a ticket will be foreign to the people of the future. Corporations, whose profit will be at an historic high can act as the patron of arts, a form of cultural tax to facilitate cultural innovation, similar to Florentine bankers who funded Renaissance artists.

The potential dark side of this future is that the big corporations and technology companies will have immense power. With automation, their marginal cost will be at or near zero. A form of automation tax can be placed upon them to fund the Universal Basic Income system, the desire for more profit will encourage these corporations to innovate. The tax they pay is similar to the wage system of today, the tax for the Universal Basic Income will provide a healthy consumer class for the corporations.

Technology companies with a monopoly in big data will have more power than governments in a shared economy of the future that is built on the Internet of Things. The flow of information is extremely important, if these technology companies were to control the flow of information by limiting bandwidth, it could create a form of scarcity on the most important resource in the digital era. They would have a strangle hold that society as bankers or oil companies in our current era.

The basic conditions for living, working, leisure and corporate spaces have been explored, spaces designed should follow these basic conditions.
5.2 SITE SELECTION

This project is intended to be a city-wide design. The scope and limitation stated to have an area of the city selected, that local design would be a representative of the speculated city-wide design.

For the local design to be representative, the site selected must be the amalgamation of diverse functions. It must have significant public space, civic, cultural, commercial and residential space within close proximity, Aotea Square satisfy the selection criteria.

Most of the structure will be built between the Auckland Town Hall and the proposed CAB apartment complex. Auckland Town Hall with its philharmonic concert hall and the apartment represent two important spaces, leisure/cultural and living.
Fig 5.2.1 Aotea Square is the figurative and literal heart of the Auckland

Fig 5.2.2 The two façades are in stark contrast, rectilinear utilitarianism and decorative Neo-classical. Bridging between these two façades will form the bulk of the designed structure.
Figure 5.2.3 explores the idea of turning the main functional spaces of the buildings around the site into positive objects. The red represents the entry and exits that connects these main functional spaces to the circulation spaces of the Aotea Square. Showing the entrance and exit of the buildings highlights the restricted nature of these spaces, often requiring a ticket to pass through the threshold for all. The Sky World entertainment centre is the exception, such space is the legacy of the capitalist society. In a post-capitalism world spaces will be much more open.

Fig 5. 2. 3 The relationship between building access and the public space.
Fig 5. 2. 4 Public point of access for Aotea Centre.

Fig 5. 2. 5 Semi-public point of access for CAB building.
Fig 5. 2.7 Auckland Townhall due to the age of the building is very enclosed, even though it is open to the public.

Fig 5. 2.6 Sky World Centre as a commercial space has entrances that are much more open.
5.3 FUTURE OF SPACE

There are five groups of spaces needed for the final design.

- Residential space
- Commercial space
- Cultural/ performance space
- Public space
- Circulation space.

Spaces of the future must correspond with the society of the future. Space in a shared economy would be more open with more communal spaces. In a post-capitalist society striving to achieve post-scarcity, leisure activity will be free and open to the general public. When a society is less goal orientated and when time ceases to be a commodity, the circulation space would be more inspired by the meandering Dérive of the Situationists as opposed to the straight-line connecting point A to point B.

When a society becomes post-capitalist, commercial spaces would have the biggest change, zero marginal cost would destroy businesses selling generic goods or services. Commercial spaces of the future must turn into temporary popup space where people can exchange ideas and bespoke services. Retaining the pseudo-commercial nature of the space is important, it attract people into one place where much needed face-to-face interaction can happen. This is different from public space, where it caters more towards pure leisure and relaxation, commercial spaces can also act as a vestigial connection between big corporation and their consumer base.

Since market forces are less active in a post-capitalist society, new measures must be implemented to encourage corporations and people to invent the “next big thing”. This can be done through analysing the behaviour and habits of their consumers. Data, mood and preferences can be monitored in these commercial spaces of the future.

Public space will be greatly expanded, the far-reaching tendrils of the public domain extend beyond the virtual world of copyright. A gradient of public spaces, and in-between spaces of private to public is needed to encourage people to step outside and enjoy the city, fostering proper neighbourly behaviour.

Residential spaces should be a commodity with an unlimited supply to meet the demands of the people. Citizens of the future should be urban nomads, modular plug-in housing merges well with the extensive infrastructure of public spaces.
5.4 FUTURE SPACES VISUALIZED

The following are tentative massing design moves. They are representing the criteria for the cultural, residential and circulation spaces. It is a tentative massing exercise, identifying the defining geometric features of the respective spaces.
The residential spaces are modular units with varying sizes. Some of the old CAB apartment are kept, even though the supply of a commodity-based housing unit is unlimited space is still a limiting factor. With physical space as a scarcity, strata of classes might form. Undesirable lower levels near the ground will be reserved for those who contribute the least to the society.

Fig 5. 1 Layered dynamic state of the apartment.
The centre piece of the performance cultural space is the stage. It caters to the needs of a post-capitalism society; the stage must be visually open to the outside with circulation elements allowing passer by a glimpse of the interior. The massing around the stage provide peripheral supporting spaces, these spaces can also serve as hosts to modular units with people who are dedicated to the arts.

Fig 5. 3. 2 Philharmonic space is visually open, with few physical barriers.
The circulation space take inspiration from Dérive of the Situationists. It meanders through all the other spaces. The smaller branches serve as the leftover vestigial spaces, they will contain the semi-public commercial spaces.

Fig 5. 3 The circulation space meanders the across the structure.
Fig 5. 3.4 The architectural languages are merged together.
5.5 FINAL DESIGN
Fig 5. 1 Base structure growing out of the CAB building. The geometric shapes penetrate and host structures, creating an embedded foundation.
Fig 5. 2 The bridge structure is extended towards the Auckland Townhall. Creating two different planes of existence. This will serve as the base megastructure hosting various functions across the city.
Fig 5. 3 The residential megastructure, serves as a host for individual living module.
Fig 5. 5. 4 The philharmonic space, growing out from the existing Auckland townhall.
The circulation pathway meanders through the structure.

Fig 5.5 The circulation pathway meanders through the structure.
Fig 5. 5. 6 The central experiential space, connected on all sides with the circulation space. This space has very few openings, creating a sensory deprived interior space.
The in-between space by Auckland Townhall, and the entrance to the circulation space. Eclectic protrusions from the windows of the Auckland Townhall are crawlspaces and tunnels. Connecting the interior of Auckland Townhall with that of the central experiential space.
Fig 5. 8 The commercial space outside of the Sky World Centre. The dark ambiance portrays the space as a gathering spot for social outcasts on the ground level.
Fig 5. 5. 9 The experiential space at the centre of the designed structure. This is a sensory deprived space, made of monochromatic rough concrete. The interior surfaces serve as a blank canvas. Wandering occupants strolling through the space can have the walls “painted” with visual effects using augmented reality headsets.
6.0 CONCLUSION

This research project explored the idea of using architecture as a medium of critique against the collective complacency of humanity when facing the greatest challenges of our generation. It was never about presenting a solution to the most difficult problem humanity have ever faced, it is meant to be a thought provoker. Humanity is inherently selfish, the planet cannot be saved through a change of lifestyle, hedonistic consumerism will continue, and we will expand wherever it is necessary to feed our insatiable appetite.

The design process opened a grim window into the future, with environmental pressures of climate change and the manmade disruptor of the Third Industrial Revolution. Forcing us to fundamentally restructure our civilization and forgo many of our long-held beliefs and inalienable rights such as private property.

The solution to this grim future is to advance humanity into a post-capitalist and post-scarcity society. The success of which will remedy the grim vision, but such paradigm shift in the psyche of our species is very is idealistic. The implications of how such society can function economically is beyond the scope of this project.

The final design dealt with the challenges architecturally using a formalist language to interrogate the bright and dark side of our future cities. The formalist language is contextualized with the respective functions, residential, commercial, public and cultural. The bright aspects of the final design involve the openness of the cultural spaces and the communal living arrangements. The pervasive public space also encourages people to people interactions, but the darker realities does exist, the tendrils of corporations is all encompassing.

There are other ways to approach this project, from an economic or ecological perspective. It will take the collective intellect of the entire human race to transition our society, while formulating an ideal solution.

As a canary in the coal mine, this project has been successful. It challenged the complacency of utopian thinking and presented a formalist architectural language that can be used as a cautionary tale against inaction when facing imminent crises. It is hoped that the outcome of this project can spur interests in the grand designs of the heroic age in visionary architecture, where designers planned for entire cities.

As a solution for the challenges of the future, this project is incomplete, therein lies the flaws of visionary architecture. The vision of one designer cannot be so wise that the entire society accepts it as the objective truth. However, if we don’t have a grand and coherent vision for our future cities, then how can we tackle imminent crises as a society?

Perhaps Architecture will always be a passive participant in this long march into the future.
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Fig 5. 2. 7 Sky World Centre as a commercial space has entrances that are much more open.

Fig 5. 2. 6 Auckland Townhall due to the age of the building is very enclosed, even though it is open to the public.

Fig 5. 3. 1 Layered dynamic state of the apartment.

Fig 5. 3. 2 Philharmonic space is visually open, with few physical barriers.

Fig 5. 3. 3 The circulation space meanders the across the structure.

Fig 5. 3. 4 The architectural languages are merged together.

Fig 5. 5. 1 Axonometric drawing of the final structure. Base structure growing out of the CAB building.

Fig 5. 5. 2 Axonometric drawing of the final structure. The bridge structure is extended towards the Auckland Townhall.

Fig 5. 3. 3 Axonometric drawing of the final structure. The residential megastructure

Fig 5. 4 Axonometric drawing of the final structure. The circulation pathway meanders through the structure

Fig 5. 5. 5 Axonometric drawing of the final structure. The circulation pathway meanders through the structure

Fig 5. 5. 6 Axonometric drawing of the final structure. The central experiential space

Fig 5. 5. 7 Final renders. The in-between space by Auckland Townhall

Fig 5. 5. 8 Final renders. The commercial space outside of the Sky World Centre

Fig 5. 5. 9 Final renders. The experiential space at the centre of the designed structure
Declaration

Name of candidate: Yikei Zhao

This Thesis/Dissertation/Research Project entitled: A Cautionary Tale

is submitted in partial fulfillment for the requirements for the Unitec degree of

Principal Supervisor: Peter H. Petersen

Associate Supervisor/s: Cesar Wagner

CANDIDATE'S DECLARATION

I confirm that:

• This Thesis/Dissertation/Research Project represents my own work;

• The contribution of supervisors and others to this work was consistent with the Unitec Regulations and Policies.

• Research for this work has been conducted in accordance with the Unitec Research Ethics Committee Policy and Procedures, and has fulfilled any requirements set for this project by the Unitec Research Ethics Committee.

Research Ethics Committee Approval Number: .................................

Candidate Signature: .................................................................Date: 10/10/19

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Full title of thesis/dissertation/research project ('the work'):
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Practice Pathway: Master Architecture (Professional)
Degree: Master Architecture (Professional)
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