

Three Minutes to Midnight

Exploring the Role of Dystopia in Architectural Representation

by

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Declaration

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners. I understand that my thesis may be made electronically available to the public.

Abstract

In the early 20th century architects and planners, dissatisfied with the overcrowded and deteriorating state of large cities and inspired by the seemingly infinite possibilities offered by new technologies, began to propose their own visions of the ideal city that they believed would cure all of society's troubles. Boldly described and drawn, many of these proposals were considered breakthrough solutions and inspired generations of architects. But like utopia, these idealistic planning schemes, though undeniably influential, failed to acknowledge the realities of the contemporary city or its inhabitants, inspiring the creation of some of the most disastrous and widely-criticized projects in architectural history.

In response to the widespread failure of these projects and believing that their implementation was responsible for the creation of static and lifeless architecture, a new generation of architects proposed provocative theoretical projects that challenged traditional architectural design methodologies and re-examined the relationship between architecture and society. Their goal was not to impose their visions for how the world should be but rather to express the world as it is in order to foster new ways of thinking that could inform a more dynamic architecture in tune with the realities of its inhabitants.

Today, the disconnection between the idealized image of utopia and reality is most commonly found in the proliferation of hyper-realistic architectural renderings. Advanced digital manipulation technologies have given architects the unprecedented power to “realistically depict the impossible,”¹ leading “clients and the public at large to expect from architecture and architects a degree of quality – perfection – that is impossible to deliver in the real world”² which is putting the profession of architecture at risk of becoming less relevant through its reduction to a purely aesthetic role that does little to address the more troubling aspects of contemporary life.

This thesis is an exploration of the disconnection between the idealistic presentation of the world as depicted by utopian-fueled architecture and the everyday reality of human behaviour. By combining the power of dystopian fiction with architectural representation, this thesis is an attempt to imagine the world that architecture doesn't want to represent but never the less creates.

¹ Belmont Freeman, “Digital Deception”, Places Journal, May 2013, <https://placesjournal.org/article/digital-deception/>

² Ibid.

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Dedication

For my friends and family.

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Introduction

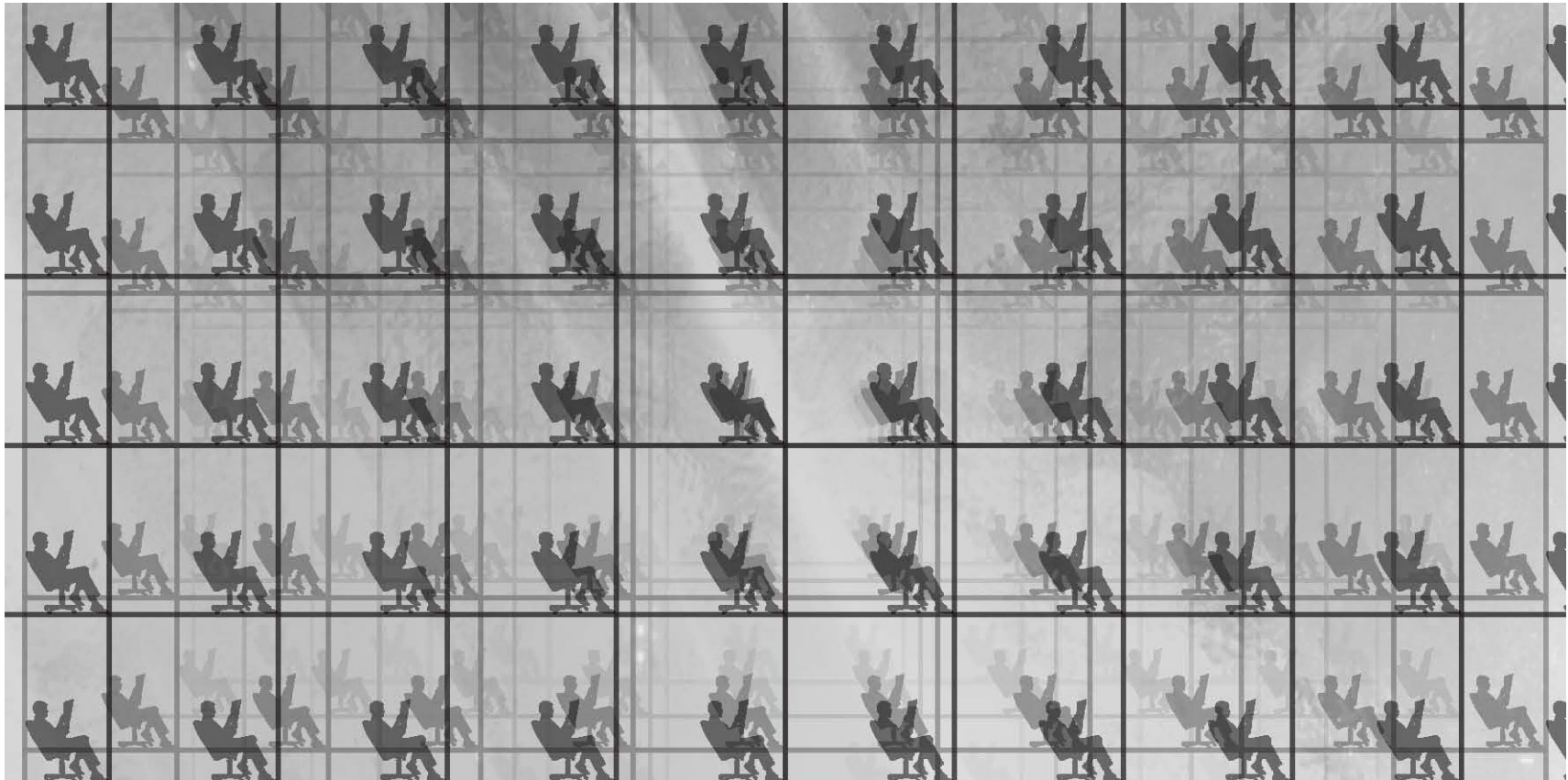


Figure 0.1- *Digital collage of Yevgeny Zamyatin's 'We' by Author (2014).*

Before pursuing a master's degree, I worked part-time at a book store. It was during one of my shifts that a friend and work colleague who knew that I had a particular affinity for dystopian fiction, recommended that I read Yevgeny Zamyatin's 'We,' an early 20th century dystopian novel about a future totalitarian society that shares many plot similarities with George Orwell's 'Nineteen Eighty-Four,' a novel that played a significant role in introducing me to the genre of dystopian fiction almost ten years ago. The future society in 'We,' called the One State, resides in a city constructed entirely out of glass. It is within the descriptions of the One State that I found the initial inspiration for this thesis: a glass city in which the surveillance of its citizens is carried out not by cameras or any sort of fictional advanced technological device but by the very architecture itself; glass walls, glass floors, glass ceilings, glass sidewalks and roads, everybody watching everybody else, each citizen performing the exact same movement at the exact same second as every other citizen as though they are all cogs in an enormous machine. It was while reading 'We' that I began to consider the potential of exploring dystopia and dystopian fiction from an architectural point of view. I began to search for more dystopian novels that featured architecture

prominently within their stories. I thought it would be interesting to create a catalogue of architectural drawings of these places that had been intentionally created to harm or control their inhabitants, the exact opposite of the traditional utopian tendencies of architecture which is almost always designed to do good.

But I became too fixated on the descriptions of the physical places, on creating literal graphic translations of these fictional built environments. I scoured each novel for the smallest details, committing each one to memory. The One State is circular in plan with gridded streets and an auditorium in the centre. The silo is 144 storeys underground with a nursery on the twentieth floor and a market on the hundredth. The high-rise is 40 storeys tall with a supermarket on the tenth floor and a restaurant on the thirty-fifth. Even though my illustrations were created from each novel's descriptions, they seemed to lack the depth and power of their literary inspirations. They were more like copies without the original message. I was so fixated on these minute details that I briefly lost sight of what makes dystopian fiction so unique and interesting; what makes it relatable not just to architecture but to society in general.

Dystopian fictions are unflinchingly critical of society. Their authors do not shy away from the shadows and unpredictability of real-life. They are not afraid to admit that humanity is flawed, that we are imperfect, that we are capable of terrible things and that, sometimes, even the most well-intentioned plans can lead to disaster. They confront and explore the topics that people are often too afraid or ashamed to acknowledge in reality.

Once I was finally able to let go of those far-too-literal illustrations, I was better able to understand the broader and more relevant role that dystopia can have within the very real world of architecture. What I realized is that it wasn't the actual places in the novels that really captured my interest and inspired this thesis; it was the way in which the authors portrayed their architecture as key players in the telling of their stories. Rather than simply being a backdrop against which their events take place, these authors depicted their built environments as active participants in and facilitators for the events taking place.

As an aspiring architect, my goal became finding a way to represent these ideas visually. This, in turn, led to an exploration

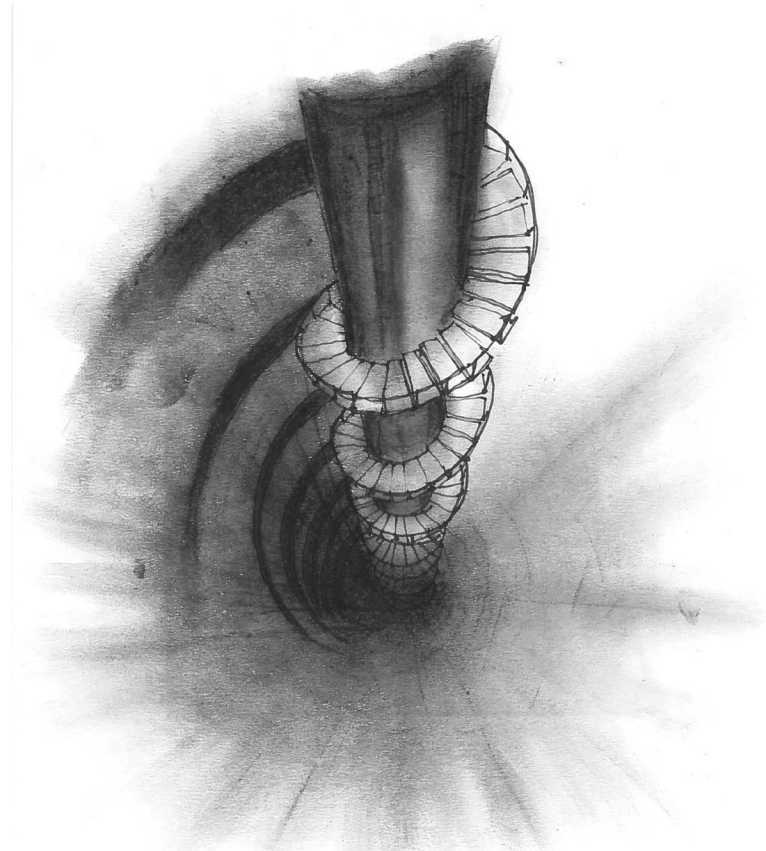


Figure 0.2- *Sketch of Silo 18 from Hugh Howey's 'WOOL' by Author (2015).*

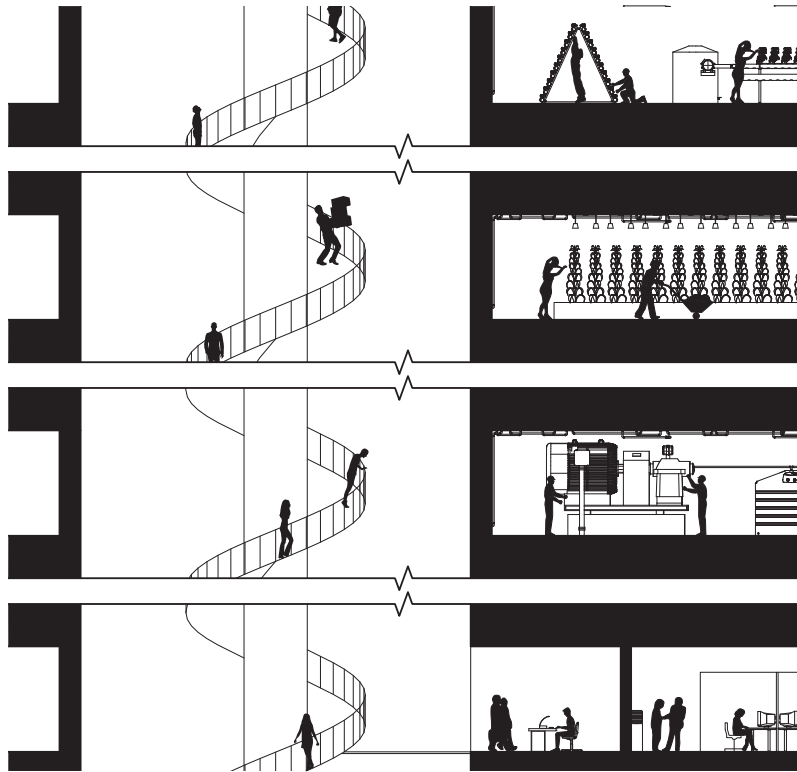


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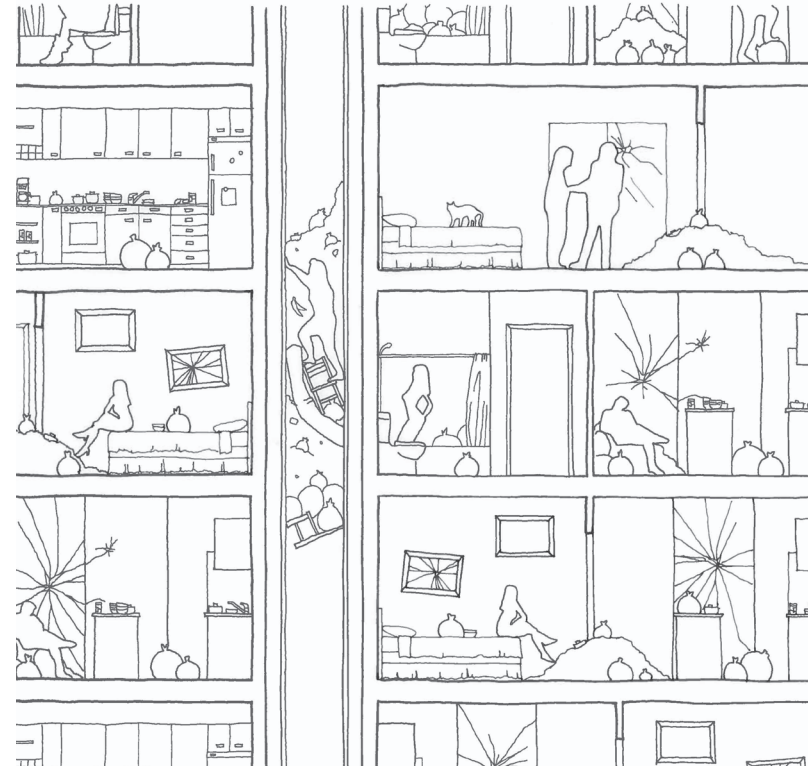


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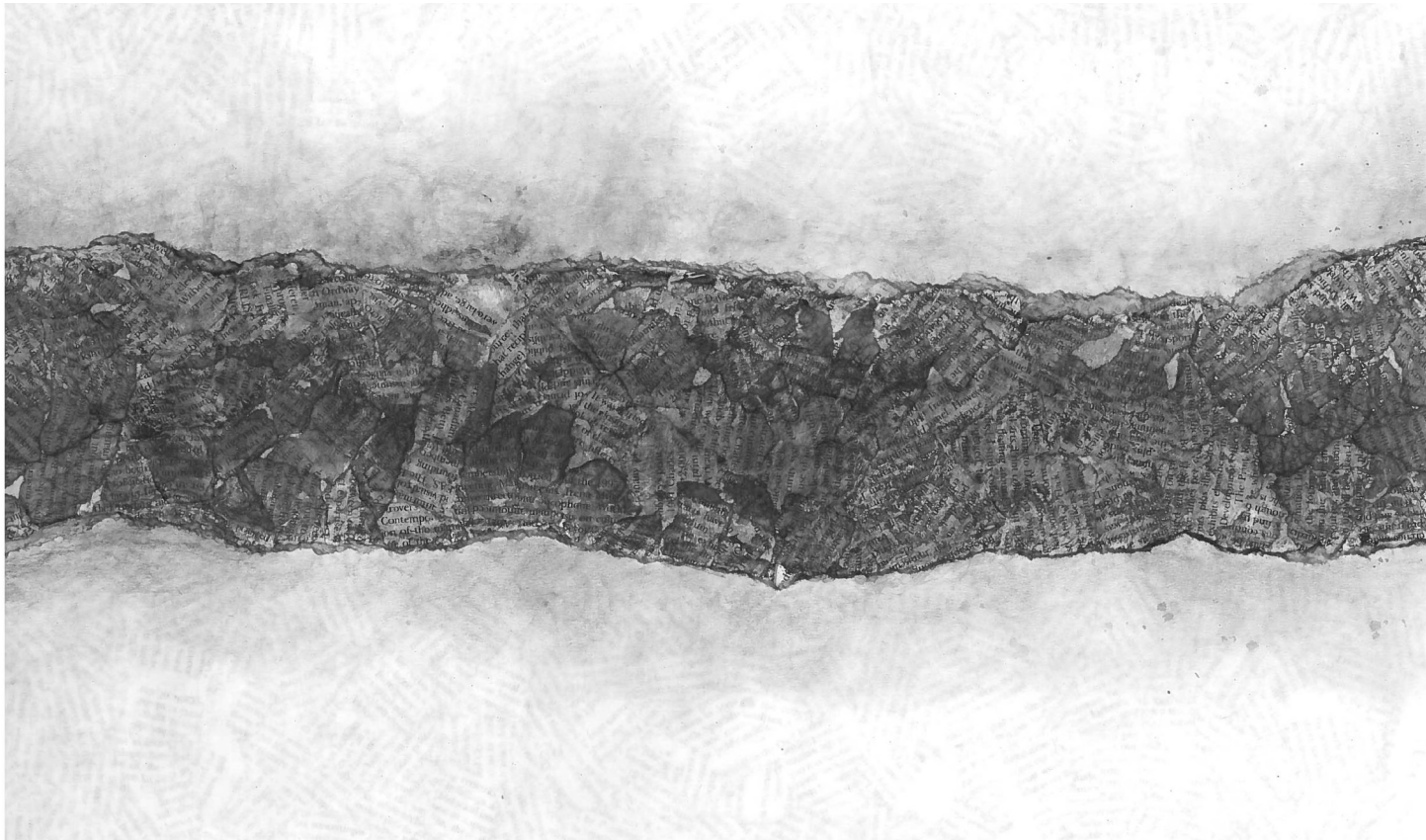


Figure 0.5- *Experimenting with different methods of representation. Collage by Author (2015).*

of the role of imagery within the profession of architecture and its evolution resulting from the development of incredible technologies and programs that now allow us to represent the most idealistic outcomes of our projects in a hyper-realistic fashion, creating a disconnection between highly-idealized utopian fueled architectural representations and reality.

As this thesis touches on many subjects spanning a wide range of time, it has been divided into five parts. Part One will explore the definition of dystopia, its origins, its connection to traditional utopian ideas, and the collective shift from utopian to dystopian thinking over the course of the 20th and 21st centuries as a result of rapid and intense social, political, technological, and cultural change. Part Two will examine some of the most iconic and influential utopian planning schemes of the early 20th century as well as the projects and plans they inspired which have become some of the most widely-criticized in architectural history. Part Three will explore the more radical architects of the second half of the 20th century and their theoretical projects which, like dystopia, attempted to represent the contemporary conditions of society rather than imposing a particular vision for how society and

architecture should be. Part Four will explore the disconnection between the current trend of rendering highly-idealized, hyper-realistic representations of architecture and the darker realities they often mask or create. Finally, Part Five takes the form of a series of architectural illustrations inspired by various dystopian fictions. Each illustration is paired with its literary inspiration in an attempt to imagine another side of architecture that is seldom acknowledged.

Ultimately, this thesis is an exploration of the disconnection between the idealistic presentation of the world as depicted by utopian-fueled architecture and the unpredictability of reality and human behaviour. By combining the power of dystopian fiction with architectural representation, this thesis is an attempt to imagine the world that architecture doesn't want to represent but never the less creates.

From Utopia to Dystopia

Part One



Figure 1.1- 'Black Flakes' by German artist Anselm Kiefer (2006). Mixed-media painting using lead, wood, plaster, oil, emulsion, acrylic, and charcoal. 'Black Flakes' was inspired by a poem of the same name by Paul Celan about the time he spent in a Nazi concentration camp. Rather than turning away from the horrors of Germany's history, Kiefer's work often attempts to confront what was considered to be a taboo subject in post-WWII Germany. He believed that the only way to move forward into the future was to confront the past.

The 20th century was characterized by rapid and intense industrial, economic, political, social, and cultural change. Some theorists claim that the 20th century saw more scientific and technological advancements than the rest of history combined.¹ But as professor and author Chad Walsh established in his book, 'From Utopia to Nightmare,' though "the achievements of the 20th century are not negligible," it would only take "a few minutes with [a] daily newspaper and a few hours with a modern history book to discover that progress has worn a double face."² While these achievements have given us a more globally interconnected world, incredible scientific, technological and medical advancements, and the excitement of space exploration, they have also led to global-scale wars, the rapid depletion of natural resources, increasing pollution, global warming, climate change, and the development of nuclear weapons that threaten the very existence of humanity.

Disillusioned by the dangerous realities of some of these achievements and concerned by the widespread implementation of these utopian ideologies, authors began to publish stories in the early 20th century of nightmarish societies that acted as thinly veiled critiques of the ambitions of contemporary society. Known

as dystopian fiction, these works "[extrapolate] from present trends"³ in order to act as cautionary tales that "critically examine both existing conditions and the potential abuses that might result from the institution of supposedly utopian alternatives."⁴

Coined by Sir Thomas More for his novel 'Utopia' (1516), the term utopia is used to indicate an ideal or perfect society.⁵ Etymologically, the word utopia has two origins: 'outopia', meaning 'no place' and 'eutopia', meaning 'good place'.⁶ Thus, the original intention of More's 'Utopia' implied that the ideal society does not and cannot exist. But in the centuries since its publication, the common understanding of utopia has become synonymous with perfection.

The opposite of utopia, a dystopia refers to a society that is considered to be bad or worse than contemporary society and is derived from the Greek words 'dys' and 'topos' meaning 'bad place'.⁷ The first recorded use of the word 'dystopia' was by John Stuart Mill in 1868 during a speech he gave before the British Parliament and later published in a book of speeches called 'The Irish Land Question,' over 350 years after the publication

of More's 'Utopia'.⁸ In his speech, Mill condemned the British government's policies on Irish land ownership stating that it was "too complimentary to call them Utopians, they ought rather to be called dystopians or cacotopians. What is commonly called Utopian is something too good to be practicable; but what they appear to favour is too bad to be practicable."⁹ In much the same way that Mill's first use of the word was framed by a critique of existing social and political concerns, dystopian fiction has come to embody the role of social critic as well, presenting stories of exaggerated futures that reflect the growing concerns of the times in which they were written while also questioning not just the "possibility of utopia but...its very desirability, equating conventional utopias with paralysis and stagnation."¹⁰

According to Walsh, traditional utopias rely on a set of "implicit presuppositions about the human condition"¹¹ in order to remain a possibility. The three most crucial assumptions are that "man is basically good,"¹² "can be shaped or conditioned to fit happily into whatever society one chooses to create,"¹³ and is capable of holding a position of power without the "danger of tyranny"¹⁴ or corruption.



Figure 1.2- *'Lilith'* by Anselm Kiefer (1987-9). Mixed-media painting using oil paint, ash, and copper wire. *'Lilith'* is a series of paintings inspired by Kiefer's time spent in Sao Paulo, Brazil in 1987. Photographing the city from a helicopter, Kiefer said that he "felt overwhelmed by its chaotic sprawl".

Rather than blindly accepting these assumptions as truths, dystopian fiction challenges them and offers a critical examination of contemporary societal conditions in order to pose its own set of fundamental questions such as “does man as a species have a definite ‘nature’? Can that nature be changed? Can a society be rationally blueprinted and then created without doing violence to the stubborn human factor? How far can man shape his own destiny? Are there built-in limits to the scope of his planning? What is happiness? Does utopian planning lead to happiness? Is personal freedom a luxury or a necessity? Finally, are man’s nature and the utopian dream locked in inescapable conflict, so that one or the other must yield?”¹⁵

By examining works of dystopian fiction more closely, it becomes clear that many of them, though unique to the contexts in which they were written, contain very similar recurring themes that ultimately address the nature of humanity and the sometimes dangerous consequences of blindly accepting utopia without first examining its possible effect on society. The following examples of dystopian fiction distinctly emphasize the importance of critically examining both utopian desires and the realities of contemporary

society so that we can begin to reconcile the two and propose more informed and intelligent solutions to the problems facing humanity.

The Machine Stops

E.M. Forster's 'The Machine Stops,' published in 1909, is a short story about a distant future where the surface of the earth has been abandoned and humanity now resides underground in an endless hive of individual, isolated hexagonal cells. Each cell is "a pushbutton paradise"¹⁶ with a button for "every need and desire"¹⁷ that arises; a button for listening to music, for giving or attending lectures, for communicating with others, for isolating oneself, for bathing, for medical treatment and on and on, each function carried out by the omnipotent Machine. The dark, isolated, mechanized lifestyle has caused humans to become pale, "swaddled lump[s] of flesh"¹⁸ and, in time, their dependence on the Machine compels them to worship it like a god. Crimes against the Machine and against society are punishable by Homelessness, a sugar-coated euphemism for execution that entails banishment to the earth's inhospitable surface where death is inevitable. So firm is their belief in the Machine that nobody is initially aware of its gradual breakdown, blaming the minor quirks in its functions on a lack of maintenance by the Committee of the Mending Apparatus when, in reality, the knowledge of maintaining and repairing it has been lost. Eventually, the Machine stops, and as all functions cease, the people crawl out of their individual cells, flooding the

darkened tunnels of the underground hive, screaming and crying out for euthanasia before "dying by hundreds out in the dark,"¹⁹ betrayed by the Machine on which they had grown so dependent. At the end it is revealed that some of the humans that had once been condemned to Homelessness, had managed to survive on the surface of the earth, "hiding in the mist and the ferns until [their] civilization stops"²⁰ and they can begin a new life, free of the oppressive Machine.

Written during a time of extreme industrialization, particularly in manufacturing methods that led to widespread dissatisfaction and resentment among the working class, Forster's 'The Machine Stops' reflects some of the concerns of the early 20th century resulting from the intense mechanization of manufacturing industries: that is "the fear that the machine will lead to the mechanization of human life and finally to the control of human life; the fear that the machine will dwarf men and take from them their self-respect, pride, and sense of uniqueness; the fear that reliance on the machine will be not only psychologically and spiritually harmful but in the end physically destructive; and the fear that men may even come to make of



Figure 1.3- 'Lazy Lad' by John Holcroft (year). This illustration was completed for a 'Big Issue' editorial on the laziness of youth.



Figure 1.4- 'Ivy Girl' by John Holcroft. Satirical illustration depicting the sedentary lifestyle resulting from addiction to technology.

the machine a false idol which they will worship.”²¹ His work also touches on the idea of the “sin against the body”²² both physically and spiritually as the years of dependence on the Machine have caused their bodies, “the home[s] of ideas,”²³ to become weak and “colourless.”²⁴ Though written over one hundred years ago, these messages remain just as relevant in today’s society where incredible achievements have made a number of the “futuristic” technologies described in the story not only possible but real. We can and often do communicate through instant video messaging and our reliance on new digital technologies such as phones, computers, and tablets can be likened to the civilization’s reliance on the Machine, with many forms of knowledge, communication, and entertainment easily available to us at the push of a button.



Figure 1.5- *'App'* by John Holcroft.

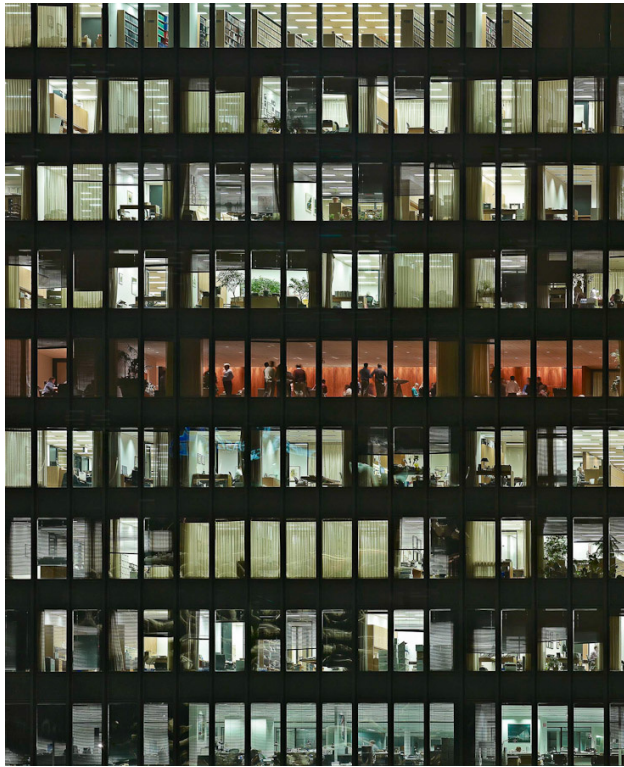


Figure 1.6- *'Transparent City #92'* from the photography series *'Life in Cities'* by Michael Wolf (2005).

We

Yevgeny Zamyatin's 'We,' published in 1924, was the inspiration for George Orwell's famous '1984' though it is much "less familiar to the general reader"²⁵ despite the fact that the two share very similar plots. 'We' takes place in a future utopian society called the One State, a fully-planned, self-contained, climate-controlled city presided over by the Benefactor. Made entirely from glass (the floors, walls, ceilings, roofs, streets, sidewalks etc.), the very architecture of the One State "facilitate[s] the benign supervision maintained by the [Benefactor] and his spies"²⁶ as "disloyal thought or action"²⁷ is the most dangerous crime that one can commit in the One State. The citizens or "ciphers" wear identical uniforms, have numbers in place of names, and perform every task and activity "according to Taylorist mechanics"²⁸ with "not one extraneous gesture, twist, or turn"²⁹ in order to maintain the machine-like efficiency of the One State and achieve "mathematically infallible happiness."³⁰ Life is controlled by the Table of Hours, an hour by hour schedule that dictates when citizens eat, sleep, exercise, and work - all actions which are carried out by the citizens with mechanical precision. Once a year, on the Day of the One Vote, the citizens participate in a symbolic election at which the Benefactor is openly, knowingly,



Figure 1.7- *'Dome over Manhattan' by Buckminster Fuller (1960). Buckminster Fuller's proposal of placing a glass geodesic dome two miles in diameter over Midtown Manhattan in order to create a perfectly climate-controlled environment within the city and reduce air pollution.*

and unanimously re-elected, unlike the “disordered, disorganized elections of the Ancients”³³¹ where “the result of an election was not known beforehand”³³² and, “in the history of the One State,”³³³ there is not one “single instance in which... even one voice dared to disturb the magnificent unison.”³³⁴ In the One State, collective equality and “rhythmically Taylorized happiness”³³⁵ are maintained through the mechanization of human life and the abolition of individual freedom and originality. When the perfect balance of society is threatened by rebellion as citizens begin to develop imaginations, considered to be “the last barricade on the path to happiness,”³³⁶ the One State develops the technology to surgically remove that part of the brain where the imagination resides, promising the citizens that the “path to one-hundred-percent happiness”³³⁷ is to undergo the Great Operation, after which they will be “perfect” and “machine-equal.”³³⁸ The citizens then line up in droves to obtain the mandatory Great Operation and those that refuse are summarily executed as the promise of reason’s victory over the imagination threatens to wipe out all traces of humanity left in the world.

Similar to ‘The Machine Stops,’ Yevgeny Zamyatin’s ‘We’ expresses the fear that a growing reliance on machine technologies

will result in the mechanization and eventual control of human life itself leading to a loss of freedom, self-respect, and individuality. But it is also, more specifically, a critical examination of the social and political shift brought on by the Russian Revolution of which Zamyatin was a strong proponent. When the revolution began, “he greeted it with boundless enthusiasm and proclaimed its promise in one lecture hall after another.”³³⁹ But not long after and even before “the horrors of Stalinism,”³⁴⁰ he began to grow increasingly anxious over the evident “drift towards totalitarianism.”³⁴¹ So ‘We’ was written in 1920 as an “attack on the way in which the Soviet Union was betraying the principles of the Revolution” by paradoxically “killing men in order to save mankind”³⁴² and is often credited with “accurately [forecasting] many of the nastier practices that [became] standard in the police states of both the left and the right.”³⁴³ Witnessing and experiencing firsthand the kind of damage that can be caused when seemingly good intentions become skewed or misconstrued, Zamyatin wrote ‘We’ as a warning “not against the horrible consequences of a political theory wicked and stupid from the start, but against the enormities that can rise from a relatively good movement when it becomes twisted, perverted and demonic.”³⁴⁴

The Circle

'The Circle,' by Dave Eggers, was published in 2013 and takes place in a near future in which a giant social media conglomerate called the Circle has "subsumed all earlier iterations such as Google, Facebook, and Twitter"⁴⁵ to become the world's largest internet company. The Circle campus contains every amenity one could think of: offices, entertainment and sports venues, stores, libraries, an emergency clinic and health centre, dormitories etc. All of the buildings are made of glass to "underline the Circle's mantra of 'transparency'"⁴⁶ and are named after different time periods like the Renaissance or the Enlightenment. In the Circle, participation on social media, though often emphasized as optional, is crucial to being a part of the "community" (a guise under which "all infringements of individual rights are supported in the name of the common good")⁴⁷ with an acceptable level of participation only achievable when every waking moment is spent "smiling," "frowning," "zinging," and commenting on online messages, articles, surveys etc. Each "Circler" is given a participation rank and lack of participation results in polite scolding.⁴⁸ The Circle's ultimate goal is the acquisition of all human knowledge to be obtained and made available to the entire world through total global transparency, everyone able to

watch and be watched by everyone else. As the Circle continues to expand and develop evermore invasive technologies, its goal of transparency is promoted as the inevitable next step to a safer, happier, and more connected society. If everyone is watching everyone else then nobody will feel compelled to commit crimes and if everyone can talk to everyone else then nobody will ever be alone. Those that publicly condemn the "supposed monopoly of the Circle"⁴⁹ and denounce the notion of total transparency as a violation of basic human rights are mysteriously revealed to be "criminal[s] or deviant[s] of the highest order."⁵⁰ Finally, the Circle begins to take its final steps towards "completion," attempting to "perfect democracy"⁵¹ by assuming all government services and forcing every citizen to register a Circle account that will effectively render traditional forms of governing obsolete. The seeming inevitability of the Circle's completion brings with it the promise of a "world without secrets, without shame and without the need for permission to see or to know, without the selfish hoarding of life."⁵² Once the Circle is complete the world will be "replaced by a new and glorious openness, a world of perpetual light"⁵³ that will lead to "peace," "unity," the clarification of all earthly "uncertainties," and the elimination of the "messiness of humanity."⁵⁴



Figure 1.8- *Untitled images from the photography series entitled 'Removed' by Eric Pickersgill (2014). For this series, Pickersgill had his subjects hold their positions while they used their phones/tablets then removed the devices before taking each photo. These images form a critique of society's growing dependence on technology.*



Figure 1.9- 'Give Your Ego Some Likes' (right) & 'Twitter Drip' (left) by John Holcroft.
Satirical illustrations depicting contemporary society's addiction to social media.

Though it has received mixed reviews since its initial publication, 'The Circle' is quickly being regarded as "one of the most perceptive and prescient books of the new century."⁵⁵ Critical of the proliferation of social media websites and digital technologies in our daily lives, Dave Eggers presents 'The Circle' as an exaggerated near future that speaks to the "impact of the computer age on human beings"⁵⁶ rather than getting bogged down by the plausibility and technical accuracy of the digital software and devices introduced in the novel, something which reviewers have been all too quick to criticize. It's the complete absurdity of some of these technologies that render the messages presented by Eggers that much clearer. As Margaret Atwood stated, in her article 'When Privacy is Theft,' "publication on social media is in part a performance." The use of social media platforms like Facebook, Instagram, and Twitter provide us with the tools and opportunity to create new identities and present ourselves any way that we want, often resulting in heavily edited, less flawed, and more perfect representations. With these digital tools becoming more and more invasive, the line between our virtual lives and reality is becoming increasingly blurred. 'The Circle' reflects this idea at its most extreme by presenting some

of the psychologically-damaging effects of living in a world where that line is completely eradicated, "a world of ever-present daylight"⁵⁷ in which "we are never offstage."⁵⁸ But perhaps one of the most pressing concerns about contemporary society alluded to in 'The Circle,' is not just the elimination of privacy but "our strange drive to display ourselves"⁵⁹ that leads us to willingly participate in these performances and "surrender any side of ourselves that is not fully outgoing and public."⁶⁰



Figure 1.10- *'Bohemia Lies by the Sea'* by Anselm Kiefer (1996). Mixed-media painting using oil, emulsion, shellac, charcoal, and powdered paint on burlap. *'Bohemia Lies by the Sea'* was inspired by a poem of the same name by Ingeborg Bachmann that talks about longing for utopia while simultaneously understanding that utopia does not exist and, therefore, cannot be found.

Coinciding with the accelerated progress of the 20th and 21st centuries, dystopian fictions have seen an immense surge in popularity over the last one hundred years. In his book, 'From Utopia to Nightmare,' Chad Walsh proposes two reasons why the last century has seen such a massive shift from utopian thinking to dystopian. The first is that "utopia has failed."⁶¹ By which he means that, despite the many achievements attained in the 20th and 21st centuries, utopia seems even "farther from realization than a century ago."⁶² The second is that "utopia has succeeded" meaning that "many things that seemed utopian a century ago have now come to pass – but the result is not utopian."⁶³ Ultimately, it is a combination of these two reasons that has led to an increasing fascination with dystopia. On the one hand, the incredible advancements of the 20th and 21st centuries suggest that "much of utopia is coming true" and we may be "nearer to utopia than we have realized."⁶⁴ On the other hand, many of these advancements have also resulted in some of the most horrifying moments in history, indicating that "there seems to be a built-in price tag on every utopian advance."⁶⁵ Utopian desires are important as drivers of progress. However, traditional utopias rely on "several tacit assumptions"⁶⁶ about humanity that fail to

address some of the darker and more chaotic aspects of reality. As history has revealed, the unquestioning acceptance of these assumptions can lead to disastrous consequences. This is where dystopia has become especially valuable, providing a critical and questioning look at both our collective utopian drive for a better world and the unpredictability of reality in order to help us make better informed and more intelligent decisions for our future.

The relationship between utopia and dystopia has been likened to that of an artist and art critic, respectively.⁶⁷ The role of utopia has always been the primary one, to "dream dreams and prod the imagination and conscience of mankind."⁶⁸ The role of the dystopia is secondary but crucial. That is, to "take a long look at [utopian] dreams, handle them, look for defects, [and] try to imagine everything that could go wrong."⁶⁹ Through its critical examination of existing and potential consequences brought on by the implicit embrace of utopia, dystopia provides us with the tools to "dream more intelligently and profoundly" and to "plan with a loving and precise knowledge of existing societies and their apparent irrationalities."⁷⁰

Planned Utopias

Part Two



Figure 2.1- *'Dudley Street, Seven Dials'* (1872) - Print by Gustave Doré first published in *'London: A Pilgrimage'*. Beginning in 1869, journalist Blanchard Jerrold and Gustave Doré collaborated on an illustrated account of London life. Many of the prints in the collection feature the slums of London as both Jerrold and Doré were fascinated by the poverty and deprivation found in poorer areas of the city.

Rapid industrialization, new methods of production, and innovations in transportation technologies introduced in the Industrial Revolution of the 19th and 20th centuries along with incredible technological advancements, led to the development of new industries and job opportunities in large cities.¹ “The promise of jobs and higher wages” attracted citizens from rural communities and towns as well as immigrants from other countries, facilitating an exponential growth in the populations of cities between the mid-19th and early-20th centuries. In the short time between 1830 and 1914, the level of urbanization in developed countries, determined by the number of people living in urban areas with a population over 5000, grew from 12.3% to 35.7%.² The USA in particular saw an increase from 10 million city-dwellers in 1870 to 54 million in 1920.³ Unable to keep up with the accelerated rate of urbanization, many of the poorer areas of large cities became overcrowded and were forced to make do without many basic services like sewage systems, garbage collection, and availability to clean water, resulting in the rapid deterioration of large cities at the turn of the 20th century.⁴ Disgusted with the overcrowded and deteriorating state of large cities and inspired by the seemingly infinite possibilities offered

by new technologies, early 20th century architects and planners began to propose their own visions of the ideal city that they believed would solve this growing problem. In addition to alleviating the congestion of cities, they also believed that their fully-rationalized utopian plans and designs would help to create the perfect moral society, free of poverty and crime. But like most traditional utopias, these plans were almost always designed to be located “elsewhere,” outside the bounds of existing cities, adopting a tabula rasa or ‘blank slate’ approach that neglected to address the actual cities whose problems they purported to solve. Though undeniably influential, these utopian planning schemes failed to acknowledge the realities of the contemporary city or its inhabitants, inspiring the creation of some of the most disastrous and widely-criticized projects in architectural history.

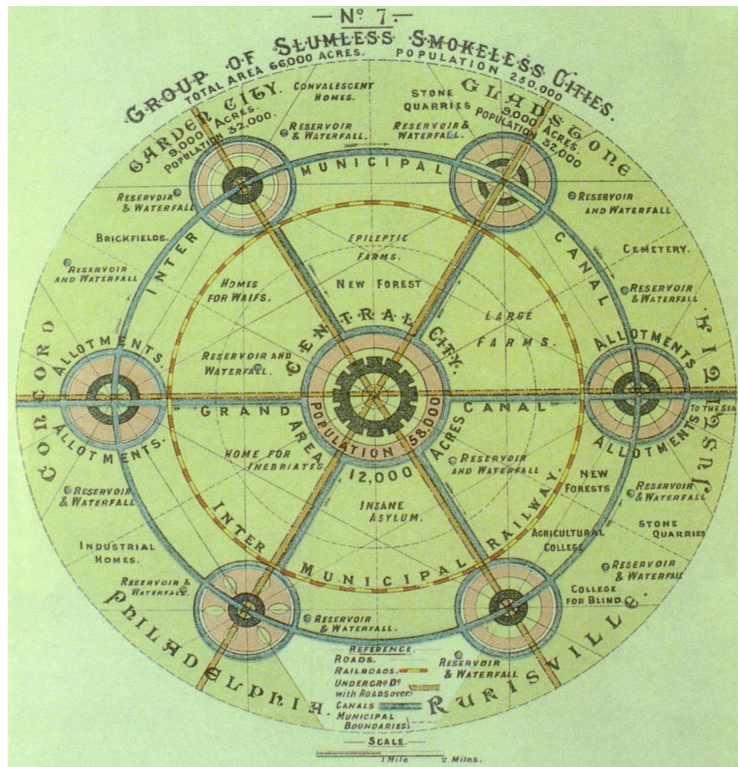


Figure 2.2- Howard's original plan depicting a network of Garden Cities (1898).

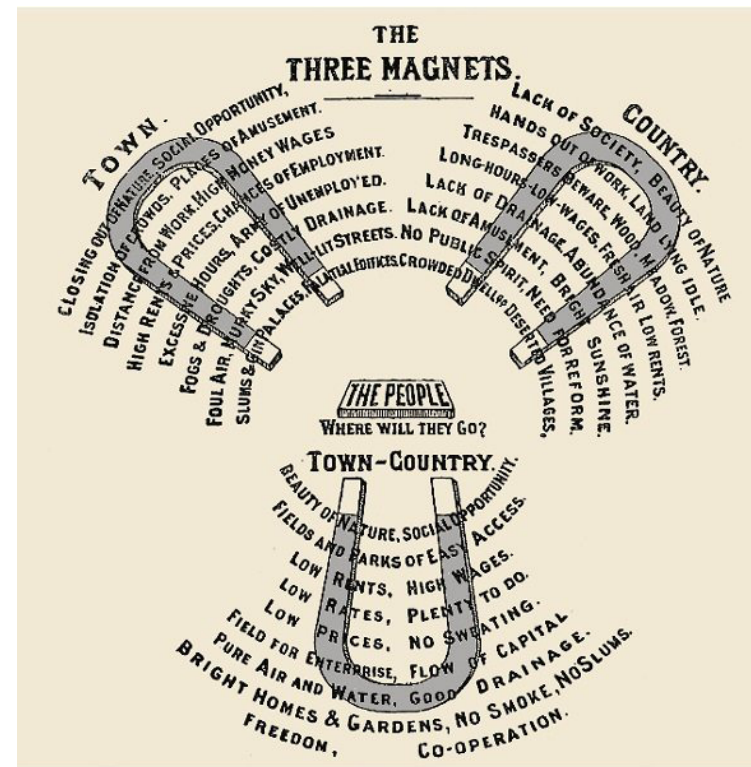


Figure 2.3- Howard's 'Three Magnets' diagram depicting the underlying context for his original utopian plans. Beneath the 'Town' and 'Country' magnets are listed the pros and cons of living in each environment. The third magnet, 'Town-Country,' represents the Garden City which attracts only the benefits of both city and country life (1898).

Garden City

In 1898, Sir Ebenezer Howard designed what he believed to be the solution to the overcrowded and deteriorated state of large cities: the Garden City. Outlined in his publication 'Tomorrow: A Peaceful Path to Reform' (republished in 1902 as 'Garden Cities of Tomorrow') the Garden City was intended to be a fully planned, self-contained, and self-sustaining utopian community that would cure the troubles of contemporary society through the perfect balance of urban and rural life.⁵ In order to achieve this, each city would include residences, industry, and agriculture along with an abundance of open space and public parks. Each garden city would accommodate a maximum population of 32,000 people on 6,000 acres of land and when a city reached capacity a new city would be started nearby eventually creating a network of garden cities linked together by rail.⁶ The first garden city, Letchworth, was founded in 1903 to moderate success but it wasn't until after the Second World War, in the wake of widespread housing shortages, that Howard's Garden City gained widespread popularity as a new method for community planning. The Garden City movement influenced the development of similar communities all over the world and is often credited with being one of the major influences in the creation of modern suburban planning which, due to the



Figure 2.4- *Original advertisement for Letchworth Garden City (1925).*



Figure 2.5- *Aerial photo of the First Garden City Letchworth.*



Figure 2.6- *Still image from Tim Burton's 'Edward Scissorhands' depicting the idyllic suburb (1990).*

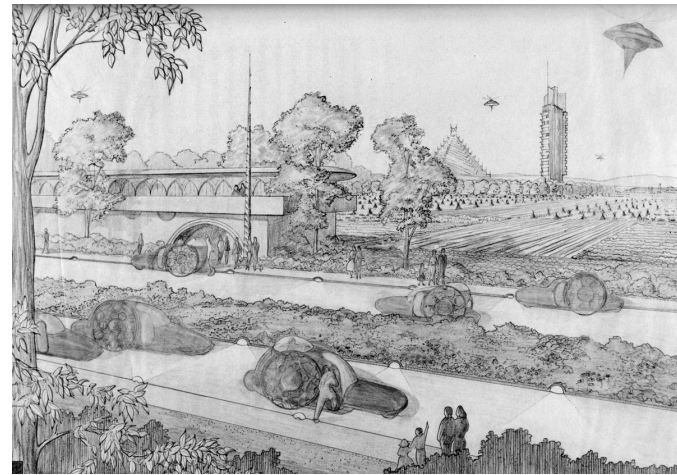
increasing popularity of car ownership in the mid-Twentieth Century that made commuting feasible, lacked the self-sustaining aspect that was an essential part of Howard's original utopian plan.⁷ As many critics have suggested, this is because Howard's plan for the Garden City was "static" and left "no opportunity to advance within society" and nor did it allow for "innovation or adaptation to unforeseen technologies."⁸ When Howard designed the Garden City, he believed that he had planned the perfect solution to the overcrowded slums of large cities but, in reality, his singular vision did little to address the "dynamism and unpredictability of cities,"⁹ instead favouring the tabula rasa approach of typical utopias that leave little room for growth or progress. As Jane Jacobs stated, in the introduction to her book 'The Death and Life of Great American Cities,' his "self-sufficient small towns [were] really very nice towns if you were docile and had no plans of your own and did not mind spending your life among others with no plans of their own."¹⁰



Figure 2.7- *Physical model of Broadacre City (1934).*



Figure 2.8- *Original sketches of Broadacre City by Frank Lloyd Wright (1934).*



Broadacre City

Another supposed solution to the overcrowding of large cities was put forth by Frank Lloyd Wright in 1932 called Broadacre City and first outlined in his book 'The Disappearing City.' Perceiving large cities as "cramped, crowded, and stupidly designed,"¹¹ Wright proposed Broadacre City to be "a complete rejection of the American cities of the first half of the 20th Century,"¹² a perfect utopia built on what he considered to be "America's greatest strengths:"¹³ the car, new communication technologies such as the radio, telephones and telegraphs, and "standardized machine-shop production."¹⁴ Wright believed that these modern technological advances had "rendered centralized city-living obsolete" and so his design of Broadacre City called for a "decentralized and horizontal...rigid square grid" based largely on the scale of a car.¹⁵ Though Broadacre City's design does not bare much resemblance to that of the Garden City, many of its underlying ideologies are the same such as reconnecting man to the countryside through the inclusion of large open spaces and the creation of a network of cities linked via a superhighway and it is also credited, along with the Garden City, as a major influence in the development of modern suburbs which are often condemned for being a wasteful use of land and an "unsustainable

form of development."¹⁶ As with most planners of these utopian communities, Wright truly "believed that by designing a better city, [its] social failures would simply dissolve."¹⁷

As previously stated, both the Garden City and Broadacre City were highly influential in the development of the modern suburb. Post-WWII housing crises combined with the widespread popularity of car ownership “untethered developers from the constraints of public transportation and they began to push further out geographically.”¹⁸ With the proliferation of the personal vehicle, suburban development offered an alternative to city life; the opportunity to live a country lifestyle while still being able to take advantage of work opportunities in the city. But it is this dependency on cars that has long been one of the major criticisms of suburban development as increased car usage has resulted in massive urban sprawl causing increased pollution and significant environmental damage.¹⁹ Mid-20th century suburban development also led to the phenomenon of “white flight,”²⁰ a term used to describe “the migration of white people from inner-city areas (especially those with a large non-white population) to the suburbs,”²¹ creating and further exacerbating issues of racial segregation and economic disparity, both issues that continue to plague many poorer inner-city communities today.²² Though suburban development managed to address many of the larger housing issues facing cities in the mid-20th century, it certainly

didn’t do so without consequences. Critics of urban sprawl have linked suburban development to some of the biggest issues facing contemporary society including increased pollution, overconsumption and wasting of resources, racial segregation, and economic disparity leading many opponents of urban sprawl to conclude that the consequences of suburban development far outweigh the benefits.



Figure 2.9- *Los Angeles urban sprawl. Los Angeles is often cited as one of the most prominent examples of urban sprawl and is currently ranked first for the highest level of air pollution in the United States.*

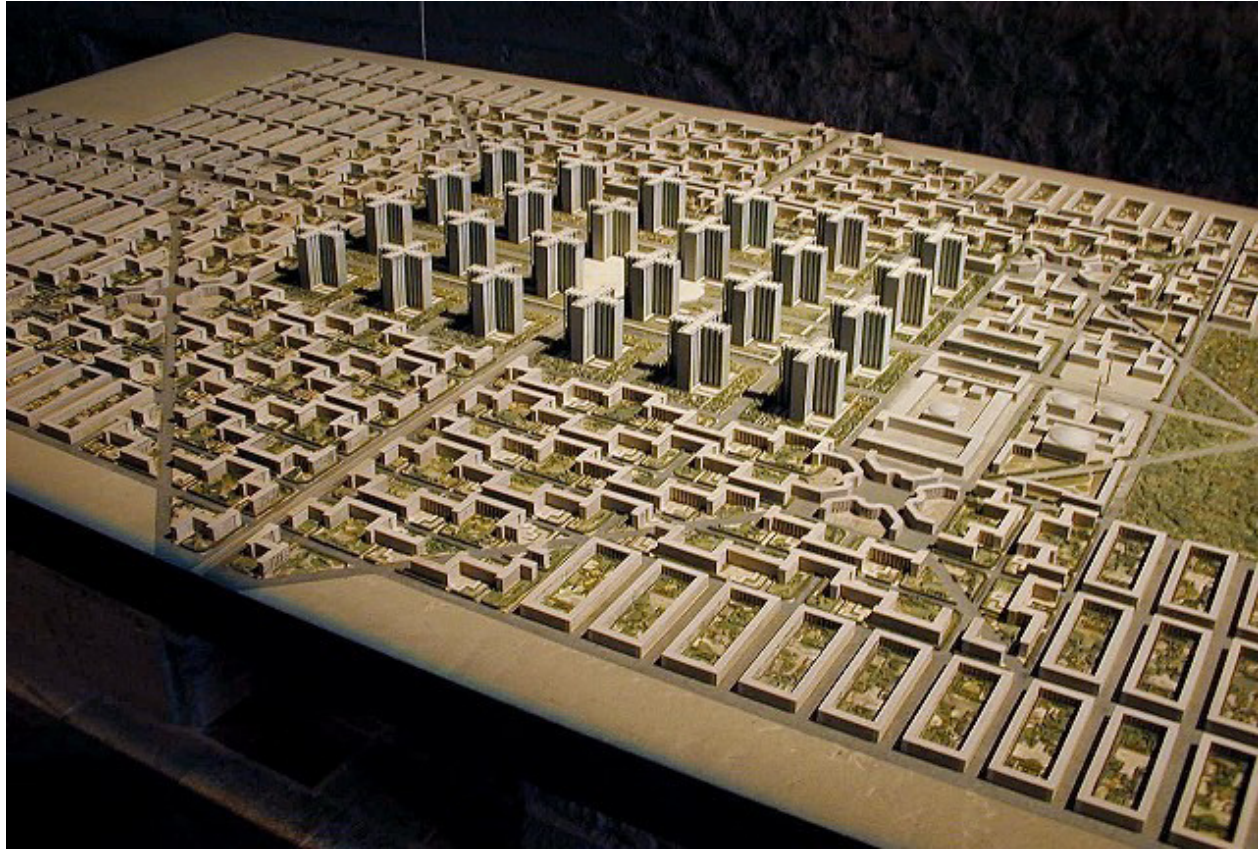


Figure 2.10- *Physical model of The Radiant City designed by Le Corbusier (1924).*

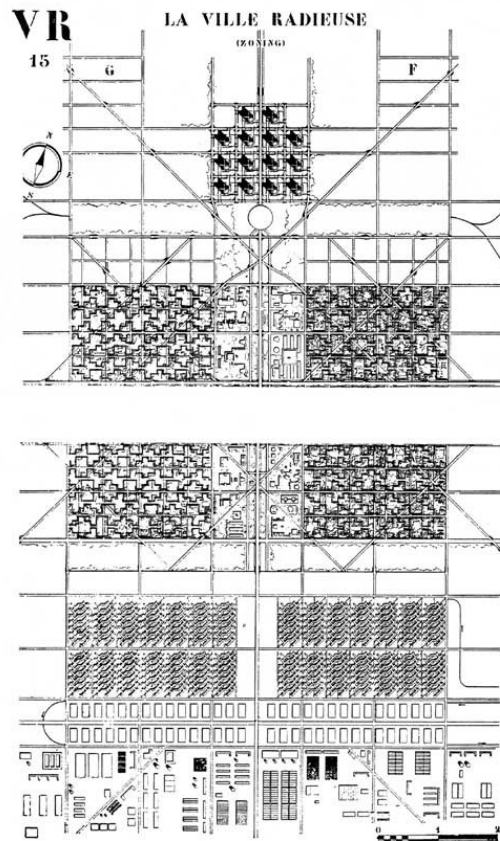


Figure 2.11- Original plan of *The Radiant City* designed by Le Corbusier (1924).

The Radiant City

One of the most influential unbuilt projects of the Twentieth Century was Le Corbusier's *Ville Radieuse* (*The Radiant City*). Corbusier first presented his ideas for the Radiant City in 1924 and later outlined them in a book of the same name published in 1933. One of the founding members of the Modern architecture movement, his projects and ideas "had an extensive influence on modern urban planning and led to the development of new high-density housing typologies."²³ Corbusier agreed with many of the Garden City planning principles such as an abundance of open space and public parks and the idea of a self-contained community, calling it a "pre-machine-age utopia,"²⁴ but he disagreed with the low density of the Garden City and condemned their resultant suburbs, stating that they were "broken, dislocated limbs"²⁵ and "a despicable delusion entertained by a society stricken with blindness."²⁶ He believed that, through the use of high-rise towers, many of the Garden City goals would be better achieved at high densities.²⁷ Like the superhighways of Broadacre City, the design for the Radiant City fully embraced the proliferation of the personal vehicle. In the Radiant City, the ground plane would be split into layers with a subway and service vehicle level below grade connected to all of the districts, a pedestrian-only level

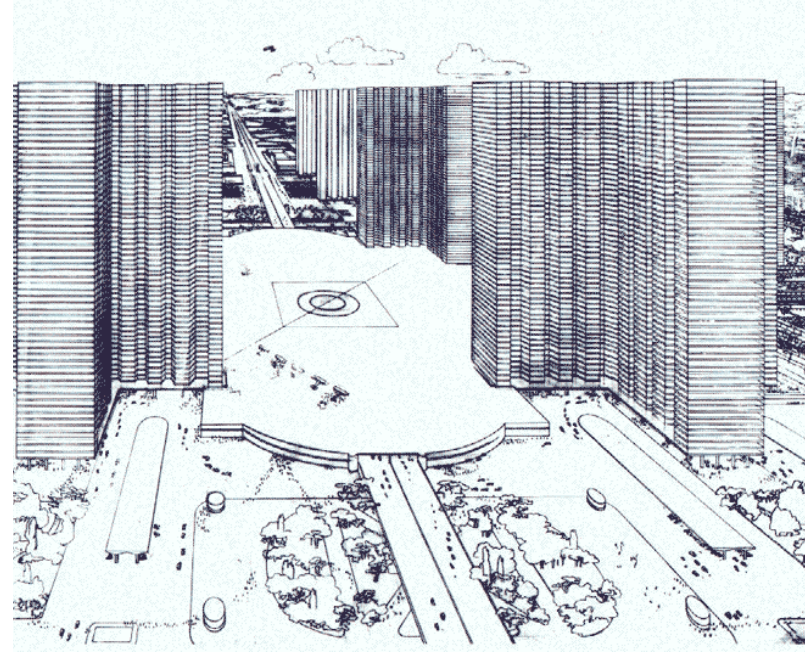
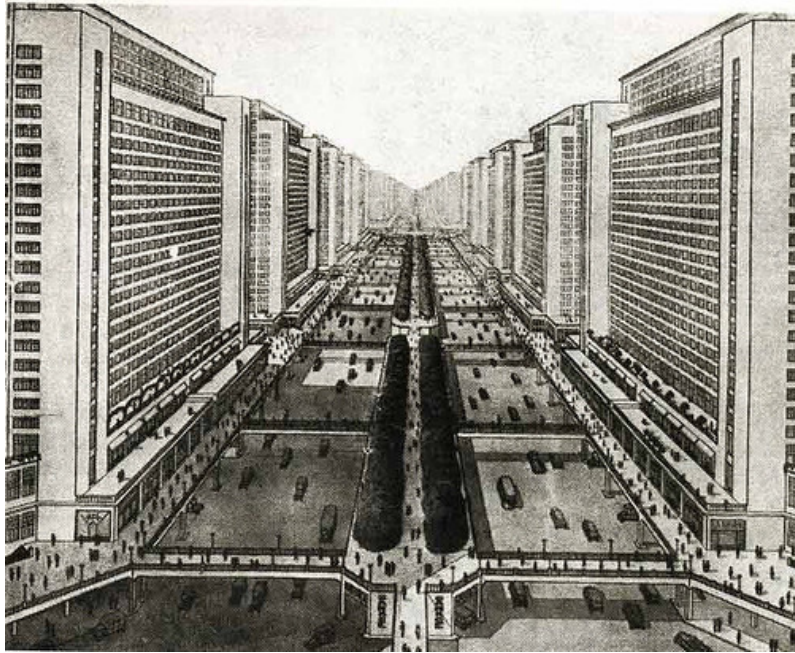


Figure 2.12- Original sketches of *The Radiant City* by Le Corbusier (1924).



Figure 2.13- *Photograph of Brasilia's construction by Marcel Gauthero (1956).*

with plenty of open space at grade, and an elevated highway for cars. The business district, located at the centre of the city, would be comprised of 200m tall “mega-skyscrapers”²⁸ and would be able to accommodate between five and eight hundred thousand people. Surrounding the business district would be the housing districts containing 50m tall pre-fabricated high-rise apartment buildings each able to house up to 2,700 people.²⁹ Interspersed throughout each tower would be kindergartens, pools, gardens and other recreational facilities, creating what he referred to as “vertical garden cities.”³⁰ Over the course of his life, Corbusier re-adapted his ideas for the Radiant City into new theoretical utopian schemes for cities all over the world including Paris, Algiers, Geneva, Antwerp, Moscow, and Morocco.³¹ Obsessed with the idea of order and harmony and the aesthetic of pure geometries, Corbusier was convinced that his utopian Radiant City, with its perfect, rationalized planning, would “break the shackles of poverty,” “dispel the miasmas of anxiety,”³² and “provide the machine-age man with a full and fruitful daily life.”³³

The closest that the Radiant City ever came to being fully realized was in 1960 with the inauguration of Brasilia, Brazil's

new capital city.³⁴ Planned and designed by Lucio Costa and Oscar Niemeyer, Brasilia embodied the “clean lines, rational planning, and space”³⁵ depicted in the design of the Radiant City and, following the tabula rasa approach favoured by many utopian planning schemes, was built completely from scratch on the central plateau of Brazil.³⁶ Drawing from Modernist planning principles, everything in Brasilia was completely zoned with separate districts for living, shopping, working etc. Like many of its utopian inspirations, Brasilia’s design adopted the automobile as its main method of transportation leading to a network of massive highways that have often been criticized for “[disassociating] people from walkable streets and neighbourhoods.”³⁷ This, in combination with the “dispersal of ministries, commerce, banks, embassies, and housing areas,”³⁸ has created a “de-humanizing” effect.³⁹ As Lucy Jordan, a journalist and resident of Brasilia, has described, being a pedestrian in Brasilia is difficult because it “doesn’t always feel like it’s on a scale designed for humans.”⁴⁰ Originally designed for a population of 500,000, Brasilia’s population, as of 2010, has grown to over 2.4 million people leading to increased economic disparity as the original apartment complexes intended to “house the rich and the poor, are now home to the rich and the rich” while “the poor have been shunted out to satellite cities.”⁴¹



Figure 2.14- *The iconic National Congress of Brazil buildings in Brasilia designed by Oscar Niemeyer and completed in 1960.*



Figure 2.15- *Aerial photo of Eixo Monumental (The Monumental Axis) in Brasilia.*



Figure 2.16- *An aerial view of the Pruitt-Igoe housing project in St. Louis, Missouri shows just how alien the project seemed in comparison to its low-rise surroundings.*



Figure 2.17- *Playground at Pruitt-Igoe.*

The high-rise apartment towers in Corbusier's Radiant City (which he called "Unités") inspired new high-density housing typologies in the mid-20th Century that were adopted for public housing projects all over the world. One of the most controversial of these projects was Pruitt-Igoe, a massive housing plan in St. Louis, Missouri designed by Minoru Yamasaki and completed in 1955. The project consisted of 33 eleven-storey buildings on a 57 acre site with a total of 2,780 apartments which, at the time, was one of the largest housing projects in the United States.⁴² Corbusier's high-rise housing towers were favoured by Modernist architects for their ability to achieve high densities without taking up too much space, leaving the ground plane free for community activities.⁴³ But the haphazard placement of the buildings on the site in the Pruitt-Igoe project had the opposite effect, creating a sense of separation between the buildings and their surrounding landscape and leaving residents without a sense of ownership for the land outside their units. Because of this, the ground plane remained largely empty and unused by the residents.⁴⁴ A similar effect occurred in the interior of each building where corridors, elevators, stairwells, and public galleries were seldom used or maintained by residents because "they evoked no feelings

of identity or control.”⁴⁵ These “anonymous public spaces,” so-called by Oscar Newman in his book ‘Creating Defensible Space,’ quickly became popular areas for carrying out crimes and violence.⁴⁶ Less than a decade after its completion, Pruitt-Igoe was internationally known for its high levels of “violence, vandalism, chaos and squalor.”⁴⁷ In 2011, a documentary directed by Chad Friedrichs was released called ‘The Pruitt-Igoe Myth.’ In it, a number of former residents of Pruitt-Igoe spoke about their experiences of living in the notorious housing project with one former resident, Brian King, stating that “in the projects, it seemed to be strategically planned to create an environment that people felt isolated, that people felt restricted, that people felt... inhuman almost. ‘You’re bad. We have to restrain you. We have to curtail what you’re doing.’ It was void of humanity. It was void of caring. It seemed more like a prison environment that you’d have to escape from.”⁴⁸

The Pruitt-Igoe housing project was to be the solution to St. Louis’ postwar housing crisis but population growth projections were over-estimated and, with the boom and popularity of suburban planning, Pruitt-Igoe’s occupancy peaked at 91% in

1957 and then began to decline.⁴⁹ By the late 1960s, Pruitt-Igoe had become nearly abandoned as the crime rates rose and the buildings began to decay. By 1971, 17 of the 33 buildings were boarded up and only 600 people still lived in the remaining 16 buildings.⁵⁰ On March 16, 1972, the demolition of Pruitt-Igoe began, less than 20 years after its completion.⁵¹ Robert Fishman, professor of history at Rutgers University, in an interview for ‘The Pruitt-Igoe Myth,’ described the footage of the implosion, which had been televised and circulated worldwide, as “shocking...because there was still in people’s minds the idea that this had been the solution.” Since its demolition, Pruitt-Igoe has become a global symbol of the widespread failure of large-scale urban renewal projects and of modern architecture with architectural theorist and critic, Charles Jencks, famously citing that first implosion as the exact moment that modern architecture died.⁵²



Figure 2.18- *(Top Left) Interior corridor of one of the Pruitt-Igoe buildings. (Top Right) Broken incinerator inside one of the buildings. (Bottom Left) Broken windows were a permanent problem at Pruitt-Igoe. (Bottom Right) Over 10,000 broken windows resulted in frozen pipes that melted and burst, destroying hundreds of apartments. These photos demonstrate the lack of maintenance that resulted in the rapid deterioration of the Pruitt-Igoe housing project.*

Architecture is an inherently utopian profession in that both architecture and utopia are concerned with solving problems and creating a better world for us to live in. But sometimes, architects and planners can become so focused on a solution that they lose sight of the problem and the context that surrounds it. These and many other utopian planning schemes proposed a one size fits all solution that, when implemented in different conditions, different cultures, and different climates, led to a great deal of impersonal, sterile, and lifeless designs. These designs also relied on a set of sweeping generalizations about humanity that failed to acknowledge the intricacies and complexities of human nature, not realizing that what is best for one community or one city may not be what is best for another. In turning a blind eye to the general imperfection and unpredictability of everyday life, many of them created just as many, if not more, problems than they actually solved.



Figure 2.19- *The decline of the Pruitt-Igoe housing project.*



Figure 2.20- *Still image from Pruitt-Igoe's first demolition on March 16, 1972. The demolition footage was widely televised and also incorporated into the 1982 experimental film 'Koyaanisqatsi' directed by Godfrey Reggio which has achieved cult status since its premiere.*

Radical Representations

Part Three

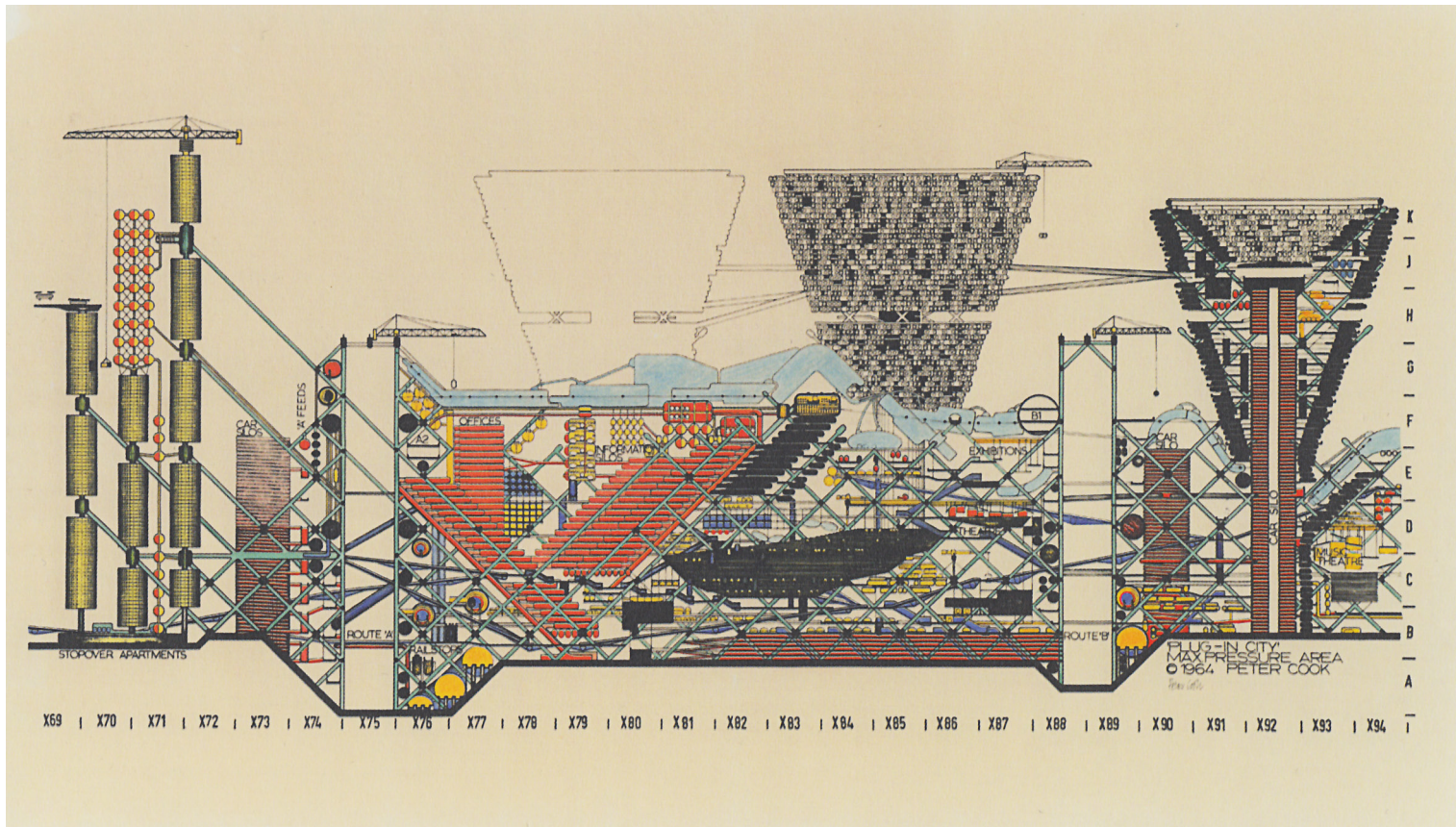


Figure 3.1- *'The Plug-in City'* by Archigram (1964). One of the most iconic projects produced by Archigram, the *Plug-in City* consisted of a giant megastructure into which all programs and services would plug in. Each piece of the city would be able to move according to the changing needs of the city as it grew and evolved.

In the last half of the 20th Century, a number of architects designed theoretical projects in response to the widespread failure of and disillusionment with modern architecture. Believing that the Modernist movement was responsible for the creation of static and lifeless architecture that had lost touch with the needs of people, these theoretical architects proposed different ways of thinking about the relationship between architecture and society. Their projects attempted to draw attention to the myriad issues facing the contemporary city through the use of imaginative and often exaggerated forms and also drew inspiration from alternative methods of representation such as narrative and film. Unlike their utopian counterparts who turned a blind eye to the shadows of contemporary life, these radical architects embraced the chaotic and less desirable aspects of the modern age, criticizing the idealized utopian visions for their rigid, sterile, and inhuman conditions. In the same way that the idea of dystopia presents a critique of contemporary society, these architects used architectural representation as a means to convey the hidden realities of contemporary life in order to foster new ways of thinking that could inform a more dynamic architecture in tune with the realities of its inhabitants. These architects understood

the implicit necessity of embracing the world as it is rather than as they wished it to be.

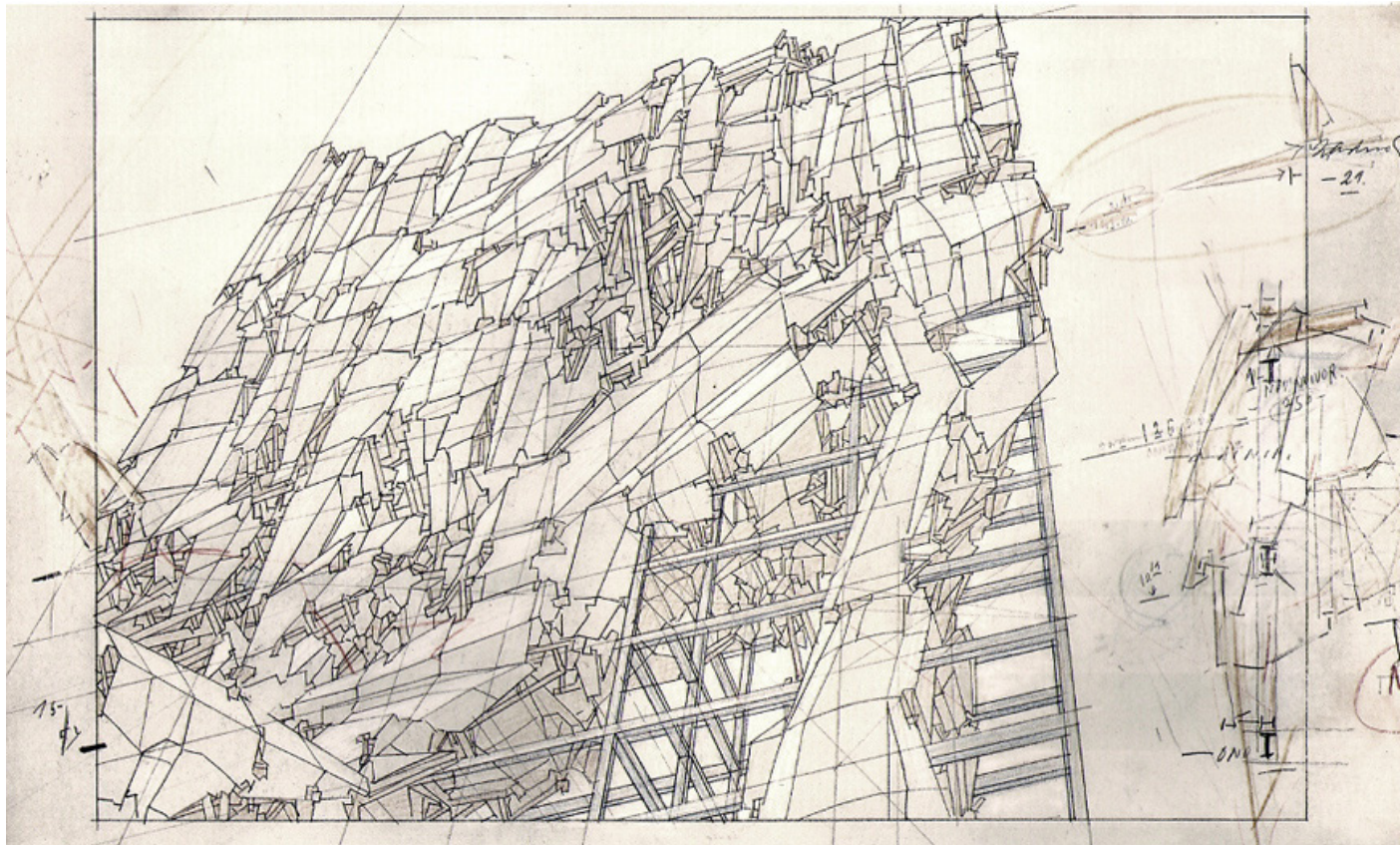


Figure 3.2- *Design for a New Parliament by Lebbeus Woods (1994). Drawing depicting a possible design for the new parliament building in Sarajevo after the original parliament building was heavily damaged during the siege. These images were not meant to act as real blueprints for construction but to act as examples of Woods' principles for reconstruction.*

Lebbeus Woods

Lebbeus Woods, theoretical architect and co-founder of the Research Institute for Experimental Architecture, was known for his radical, politically-charged, and thought-provoking drawings of fantastic architectural projects. Believing that contemporary architecture did not address or reflect the ever-changing conditions of modern society, Woods presented his work as a “step-by-step immersion into the world as it is”¹ and not as he or “anyone else who by nature is idealistic, might wish it to be.”² Whether situated in a specific location or presented as a general critique of architecture’s role in a radically changing present, Woods’ work was reflective of contemporary social, political, cultural, and ideological conditions. He believed that an architecture representative of the “radical changes in public and private life”³ occurring in the present could “actively participate in the establishment of new economic and political systems for the design and construction of buildings, and for the continued transformation of human communities around the world.”⁴ Drawn to areas of crisis, his works presented a darker, more menacing vision of contemporary life; communities left vulnerable in the wake of natural disasters and cities besieged by war and violence, struggling under political and economic upheaval.

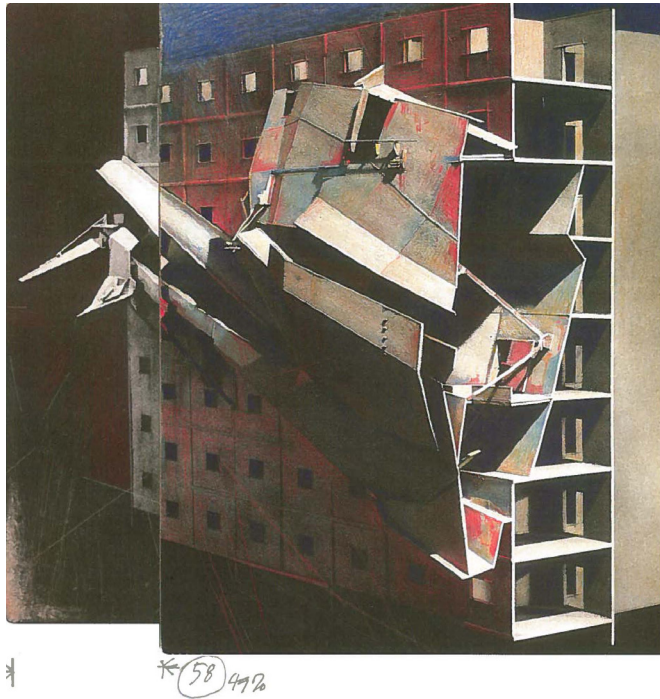


Figure 3.3- *Model of a typical residential block reconstruction in wartorn Sarajevo (1994).*

Woods' proposals for Sarajevo's reconstruction during the mid-1990s, outlined extensively in his book 'Radical Reconstruction,' presented the city as being in a constant state of perpetual change and mayhem brought on by war and violence. Acknowledging that it is only natural for a city to want to reconstruct itself in the likeness of its pre-war condition, Woods believed that to replicate the old architecture would be to replicate the old social and political order that led to war in the first place so, rather than looking to the city as it was constructed before the war, the city should understand its current state in order to create architecture that addresses and responds to the needs of its inhabitants.⁵ In this case, Woods considered Sarajevo to be "dominated by uncertainties"⁶ and to propose a traditional method of reconstruction for a city that saw so much rapid and violent change would be illogical. Influenced by Sarajevo's state of perpetual flux during the siege, Woods' drawings depicted an architecture of change, reflective of the city for which it was designed. He described these proposals as "injections," "scars," "scabs," and "new tissues"⁷ as they were not designed to erase the traces of violence from the city and nor were they intended to commemorate or symbolize the violence that occurred. The

designs were meant to draw from the inevitable permanent social, economic, and political change brought on by the war to create new methods of reconstruction that would "accept the new, the strange, the unexpected, the upsetting, the disturbing" and "engage the conflicts"⁸ of the present era. Using scavenged materials from the war-damaged city, the new methods of reconstruction that Woods proposed, would allow the inhabitants to create a "new normal"⁹ from the remnants of the old buildings and better represent the continually changing conditions of a city in the midst of war.

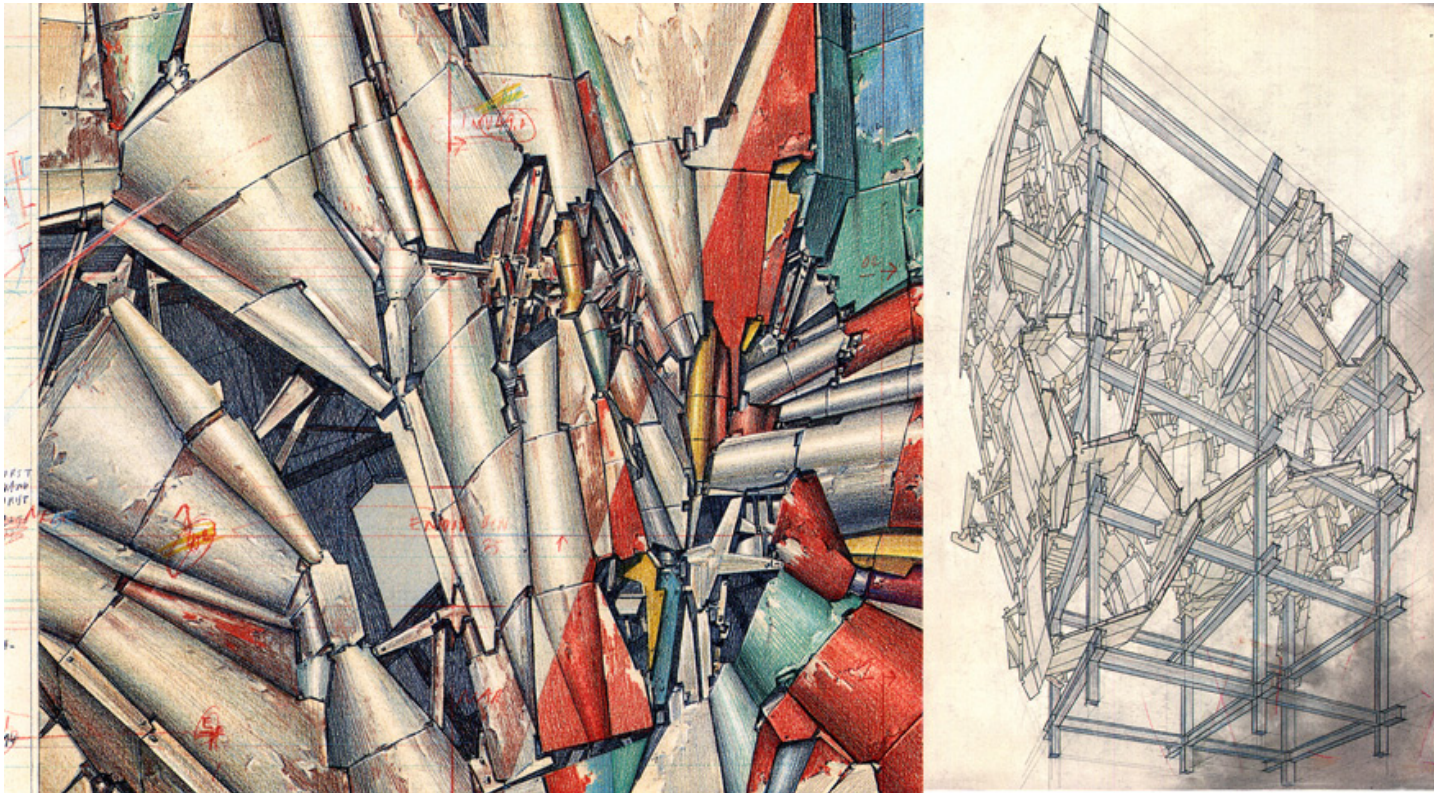


Figure 3.4- *Design for a New Parliament by Lebbeus Woods (1994).*

Woods was also interested in film as a form of representation. In the early 90s he was hired as a 'conceptual architect' for the movie 'Alien 3.' His intention for the architecture was to make it a central part of the film rather than a mere backdrop against which the events would take place.¹⁰ Unfortunately, many of Woods' original design conceptions were scrapped when the director of the film changed. Speaking about his experience working on conceptual designs for a big-budget film, Woods stated that he "realized that set designers have no power over how their designs are used, and certainly no influence on the story or its social or ethical implications."¹¹ Because of this, Woods decided to create a screenplay for one of his own original projects, 'Underground Berlin,' in which "new forms of architecture – and the way of living they enable – would play a central role."¹² Though it was never filmed, its intention was to "project architecture as a vital instrument of social change" and act as "an example of how experimental architecture might find its way, however tentatively, into the mainstream of public life."¹³

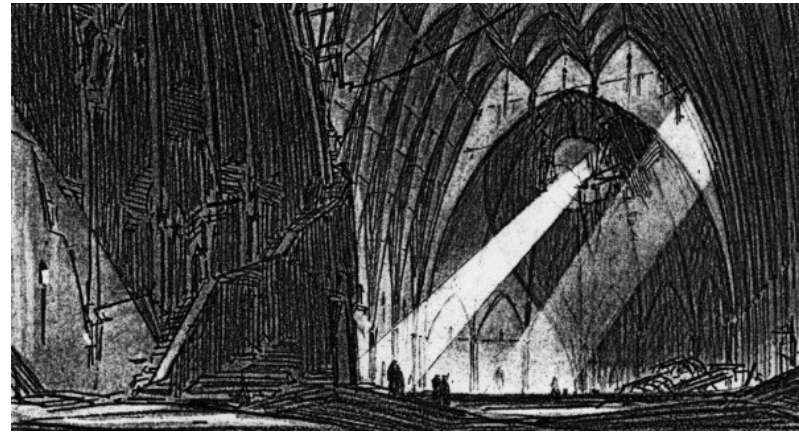


Figure 3.5- *Concept art by Lebbeus Woods for the 'Alien 3' film (1990).*

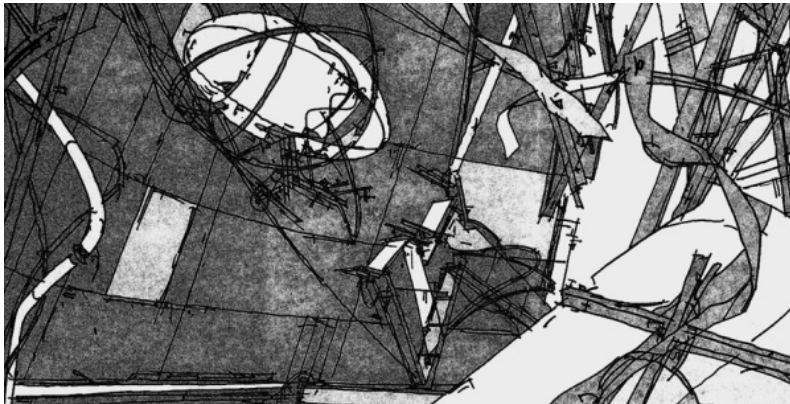
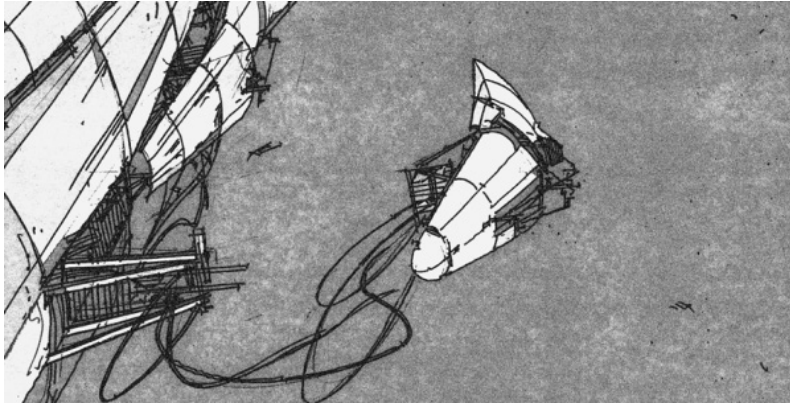


Figure 3.6- *Concept art for 'Underground Berlin' project by Lebbens Woods (date unknown). The original 'Underground Berlin' project was commissioned in 1988.*



Figure 3.7- *Physical model of a projection tower from the original 'Underground Berlin' project by Lebbens Woods (1988).*



Figure 3.8- *Exterior photo of the Cabill Center for Astronomy and Astrophysics at Caltech in Pasadena, California designed by Morphosis (2008).*



Figure 3.9- *Interior photo of the Cabill Center for Astronomy and Astrophysics at Caltech in Pasadena, California designed by Morphosis (2008).*



Figure 3.10- Interior photo of 'The Light Pavilion' designed by Lebbeus Woods (2012). 'The Light Pavilion' is a permanent large-scale installation in the 'Sliced Porosity Block' designed by Steven Holl in Chengdu, China. It is the only project designed by Lebbeus Woods to be built.

His projects were never built nor intended to be built but his ideas about the role of architecture as an embodiment of the unpredictability of everyday life can be seen in the built works of other architects such as Thom Mayne of Morphosis whose work, Woods has described, is both transformative and demonstrative of "how buildings and the spaces they provide, both within and without, can engage the unpredictable yet highly tangible dynamics of the present."¹⁴ Woods' designs and drawings transcended the bounds of traditional architectural design. Turning away from the rational and ordered geometries of the international style of modern architecture, his revolutionary dynamic forms embodied a sense of crisis and unpredictability that has inspired and encouraged architects to re-imagine their role in society as interpreters of culture in a broader and more politically engaged way.

Superstudio

Superstudio, an Italian architecture firm that operated out of Florence, Italy from 1966 to 1978, was another group that used experimental designs to propose a critical examination of the profession of architecture. They were part of the highly influential Italian Radical architecture movement of the 1960s and were best known for their provocative and satirical conceptual projects. Disillusioned by the bland and generic style of international modern architecture prevalent in the 60s, Superstudio proposed what they called “negative utopias,”¹⁵ designs that explored “theories about architecture’s environmental impact, the potential negative consequences of technology, and the inability of politics to untangle complex social problems.”¹⁶ Their most widely recognized project, ‘Il Monumento Continuo’ or ‘The Continuous Monument,’ consisted of a monolithic gridded superstructure that would wrap around the entire Earth eventually covering the surface of the planet, “leaving the Earth as featureless as the smoothest desert.”¹⁷ Never actually intending for it to be built, the project’s purpose was to comment on “the way globalization was swamping the world”¹⁸ and act as a warning of the “horrors architecture had in store with its scientific methods for perpetuating standard models worldwide.”¹⁹ Similar to Lebbeus Woods, Superstudio experimented with other forms

of representation as well, combining their iconic collages with storyboard sketches, film, and animation. Unlike other architects of the Radical movement, Superstudio’s designs took on a more cynical attitude that “rejected the optimistic view of technology’s ability to improve the world,”²⁰ imagining a future that was dominated by the unlimited power of technology.



Figure 3.11- Collage of ‘The Continuous Monument’ (1969).



Figure 3.12- *Collage of 'The Continuous Monument' as it wraps around parts of Manhattan (1969).*

Archigram

Archigram was an avant-garde architectural group based in London during the 1960s and 70s that produced a series of publications in which they presented radical designs and images that illustrated their ideas about architecture. The first Archigram publication was “an outburst against the crap going up in London, against the attitude of a continuing European tradition of well-mannered but gutless architecture.”²¹ Believing that the Modernist architects had “limited themselves to static solutions”²² which were “not enough to satisfy the needs of the people,”²³ the goal of Archigram’s work was to “express the vitality of the city life rather than suggest a plan for a new city.”²⁴ They regarded the city as more than just the sum of its physical parts. More than the built environment, they saw the city as “an infinitely intermeshed series of happenings”²⁵ brought to life by “flashing signs and unexpected incidents.”²⁶ Though others often describe their work as being futuristic, Archigram has always asserted that their projects were a “reaction to what [they] saw around [them] and the innovations spreading through English society: not only technological changes...but also the social shifts.”²⁷

In 1963, Archigram created and presented an installation at the Institute of Contemporary Arts (ICA) in London called

the ‘Living City.’ Drawing from their ideas about the city as a “unique organism”²⁸ that is continually changing and evolving, their installation presented a set of “evocations, accentuations and simulations of city life” rather than “a display of suggested forms.”²⁹ They believed that the spirit of the city was in danger of being “sacrificed for an overall conformity”³⁰ and so their installation was created as a response to the contemporary state of city planning and architectural design. As Simon Sadler stated in his book ‘Archigram: Architecture without Architecture,’ “the ‘Living City’ was a statement of faith that built form was only one half, possibly the lesser half, of the architectural experience.”³¹ Breaking from the Modernist trend of designing future cities with “traditional architectural forms,”³² the ‘Living City’ proposed the opposite, instead encapsulating “the formlessness of space, behaviour, [and] life.”³³ This notion is evident not just in their description of the ‘Living City’ installation but in all of their work. Their view of architecture extended beyond the built form of the city, instead placing emphasis on the everyday activities and “happenings,” both good and bad, that give the city life and energy. Their objective, and the underlying notion of all of their projects, was to be “perceptive of the present”³⁴ by “[illustrating] the life of reality,”³⁵ not presenting the city as it should be but as it already is.

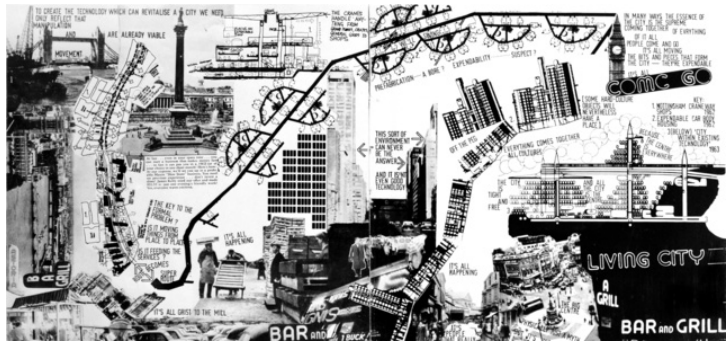


Figure 3.13- (Above) 'Come-go'. (Below) 'Communications in Living City'.
Collages for the Living City exhibition by Archigram (1963).

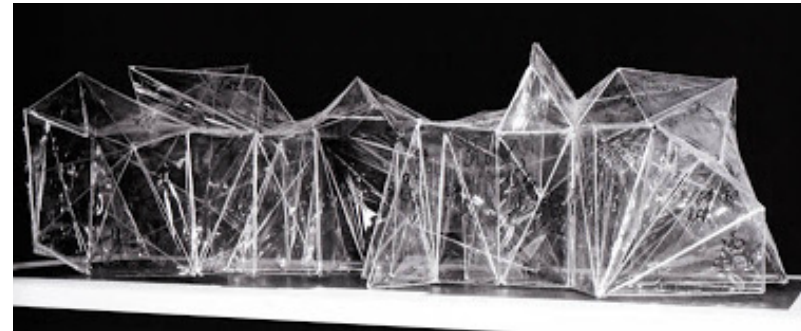
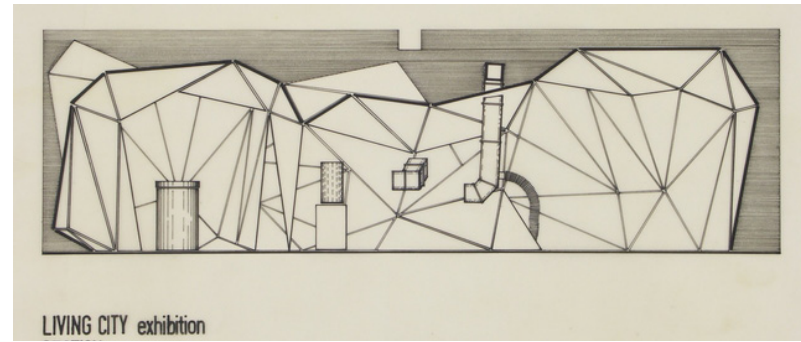


Figure 3.14- (Above) Section drawing of the Living City exhibition space.
(Below) Physical model of the Living City exhibition space (1963).

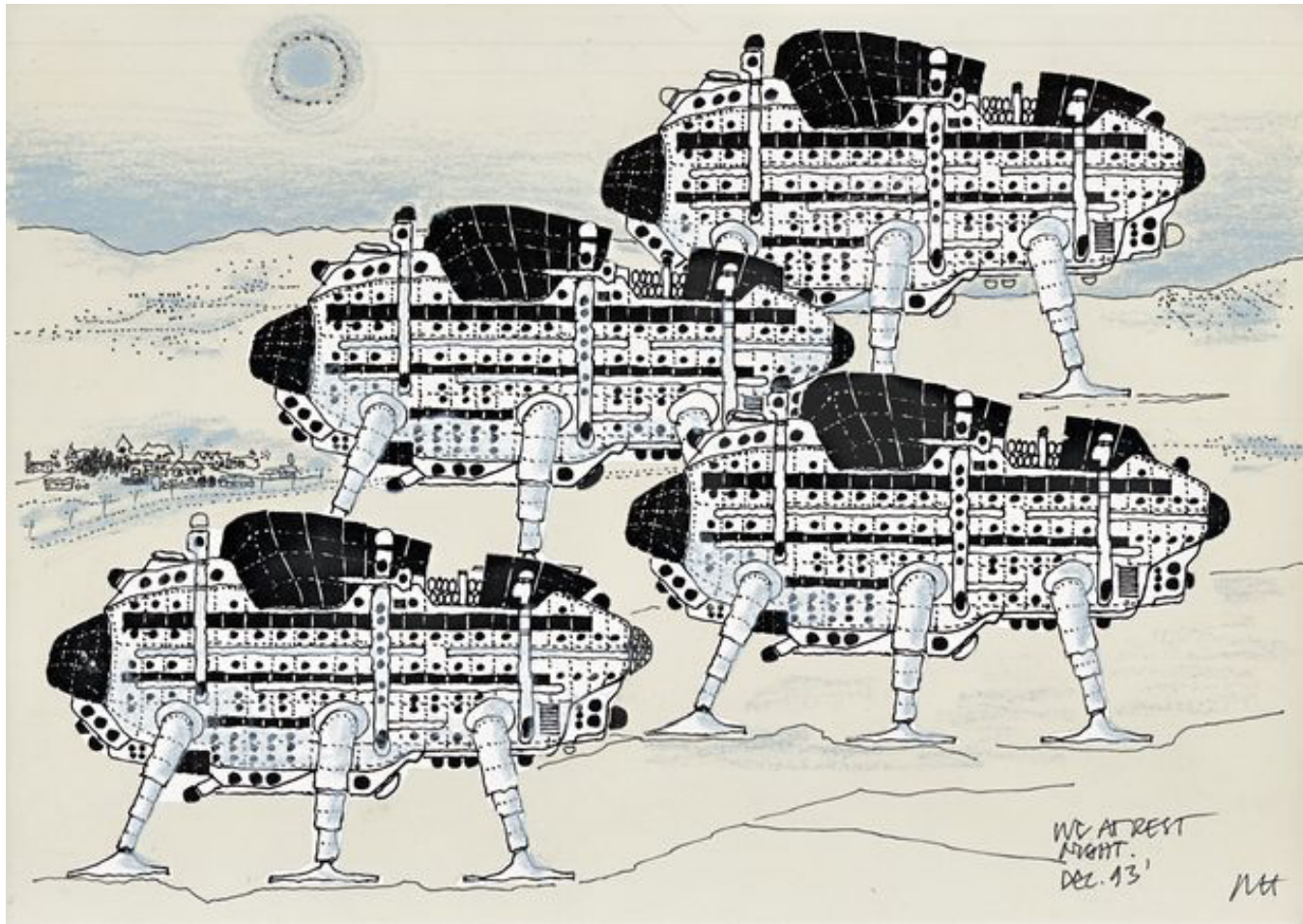


Figure 3.15- Cluster of walking cities by Archigram's Ron Herron (1964).



Figure 3.16- *NASA mobile space launcher at Kennedy Space Center.*

Unafraid of pushing the boundaries of architectural design, their projects addressed significant concerns of contemporary life through playful and innovative designs that often seemed to make fun of the sometimes over serious way that architects think of their work. One of their most iconic projects, the Walking City proposed by Ron Herron in 1964, depicted a giant self-propelled structure that contained “all the elements you would find in a functioning city: business quarter, offices, housing, public and private services.”³⁶ With detachable parts, the city would be free to roam the world and change its functions according to the needs of its inhabitants. They also envisioned a colony of walking cities able to connect via extendible arms in order to facilitate the transfer of goods. Though the Walking City may appear, at first glance, to be menacing and intrusive, it was ultimately born from “the ideas of indeterminacy prevalent in the 1960s, particularly the idea of the city as a changing entity which could respond to the inhabitants’ immediate needs”³⁷ and was also inspired by existing 45 storey movable structures at Cape Kennedy that were used for maintenance work on rocket ships. Herron saw the structures at Cape Kennedy as “proof of our ability to tackle the most staggering problems”³⁸ and therefore regarded the

Walking City as an idea of what could be achieved “immediately, effectively, and speedily if there were a similar degree of courage and commitment”³⁹ applied to tackling urban problems like “intra and interurban transportation.”⁴⁰ Though their work was often likened to science fiction/fantasy and dismissed as unbuildable, Archigram undoubtedly inspired a generation of architects to question many aspects of how a building works. Most notably, the Centre Pompidou in Paris, designed by Richard Rogers and Renzo Piano, was heavily influenced by Archigram’s work. Borrowing from Archigram’s favoured aesthetic of high-tech architecture, Rogers and Piano flipped traditional architectural design on its head by placing the building’s functions and systems, usually hidden from sight, on the exterior of the building and drew further attention to them by brightly colour-coding each system (blue for ventilation, green for plumbing, yellow and orange for electrical etc.).⁴¹ Sometimes considered to be controversial, Archigram’s work was successful in encouraging architects to re-imagine the interactions between architecture and its inhabitants and was profoundly influential in the design and construction of many projects.



Figure 3.17- *Exterior photo of the Centre Pompidou in Paris designed by Richard Rogers and Renzo Piano.*



Figure 3.18- *Exterior photo of the Centre Pompidou high-lighting the colour-coordinated building systems.*

Though the images these architects produced may appear to be darker visions of futuristic, technologically advanced cities, their underlying ideas are firmly rooted in the present, drawing inspiration from the general unpredictability and imperfection of reality that utopian planning and traditional architectural representation seldom addresses. The purpose of these projects was not to propose any sort of solution but to attempt to understand and express the intricacies and complexities of the city and its inhabitants. In doing so, these architects fostered new ways of thinking about the role of architecture and architectural representation in contemporary society. Their projects, responding to the sterile designs of modern architecture permeating society in the mid-20th century, were never intended to be built but to comment on contemporary social, political, technological, and cultural trends facing society at the time. Rather than imposing their ideals in the form of a static built object, these architects used their work to express the unpredictability of reality in order to provoke new ways of thinking about ourselves and our culture.

Digital Deception

Part Four



Figure 4.1- *Digital rendering of the proposed Apple Campus 2 in Cupertino, California designed by Foster + Partners (2011).*



Figure 4.2- *Comments from a 2011 TechCrunch article detailing the newly released plans and images of Apple Campus 2. Comments on this article have since been deleted for unknown reasons.*

In my experience, the most important thing taught in architecture school is how to graphically represent our ideas. Very simply put, we are taught how to draw. Even before entering architecture school we submit portfolios of our graphic work; artwork, schoolwork, crafts. Anything and everything that proves we have the ability, or at least the potential, to convey thoughts and ideas visually. Anything that can't be conveyed through two-dimensional floor plans or elevations or sections, is conveyed through 'renders', realistic, "photoshopped" images meant to illustrate what we hope our designs will look like and how they will be used. If neither of these methods is sufficient, we turn to maps, graphs, and diagrams. This is not new or recent. This is how architects have always operated albeit with media that reflects changes in technology (pencils, ink, watercolours, collage, computers etc.).

Today, with the advent of new technologies, the most frequently used tools are computer renders which can be digitally manipulated to look as abstract or as realistic as we want. As the author of a design, it is understandable that we would want to present the best versions of our ideas; the idealistic images

that perfectly promote how we hope our designs will exist in the world. However, one criticism of an architect's desire to emphasize these idealized images is that we may lose sight of the context and reality to which a project belongs. The weather is not always perfect. Material properties are over-exaggerated. Unavoidable budget cuts can lead to cutting corners creating further problems over time. Streets may not always be clean and free of crime or traffic. While these images are largely accepted to be a "necessary intermediate [step]"¹ in the design and execution of architectural projects, the question of 'how much is too much?' when it comes to digital manipulation has become a popular topic of conversation amongst designers, clients, and the public leading to the publication of numerous articles aimed at addressing the growing disconnect between utopian, dream-like renders and the darker realities they can sometimes mask or even create.

In the Fall of 2012, the city of Flint, Michigan held a public art competition for a temporary summer pavilion. The winning proposal, entitled ‘Mark’s House,’ was designed by London-based design studio Two Islands. The proposed design was a simple wood structure clad in mirrored panels and set on a mirrored pedestal that would give the appearance of a floating house. The mirrors were intended to physically reflect the surrounding downtown context while symbolically reflecting the demolition of thousands of foreclosed homes in the city. However, due to budget constraints and timing, the designers were forced to change the cladding material from mirrored panels to reflective mylar, significantly altering the appearance of the installation. Directly adhered to the wood frame, the texture of the mylar would change as the structure contracted or expanded depending on the weather conditions. On hot days, the wood frame contracted causing the mylar to wrinkle and giving it the appearance of “aluminum foil.”² Even with the change in materials, the project went massively over budget with the designers ultimately forced to crowdfund an additional \$10,000 in order to complete it.³

The renders were not the only aspect of the project to draw negative attention. Upon completion, a series of professional photos were taken and circulated amongst various design journals and websites that hailed the installation as a success. However, many comments were written by Flint citizens in response to the online articles condemning the project as an “eyesore,”⁴ stating that the finished project began to peel only a few weeks after it had been completed and that it had never looked like the initial renders or like the professional photographs. Some went so far as to claim that the photos had been digitally altered and considered it “unethical” for them to be published as the citizens felt they were an inaccurate representation of the installation that promoted success where they only saw failure.⁵ These accusations prompted a broader discussion on the possible consequences of hyper-idealized architectural renderings and photographs. An article published on CityLab shortly after the completion of the project, used the installation as an example to draw attention to the fact that 3D rendering technology has made it easier to manipulate any and every detail from furniture to materials to lighting and even existing context in order to create “conditions that can only exist in a fantasy world.”⁶

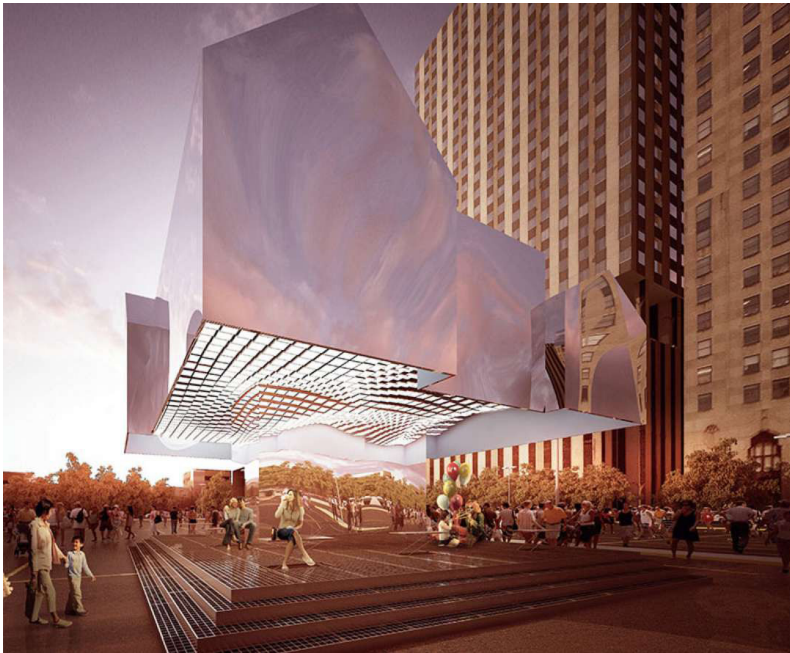


Figure 4.3- *Digital rendering of proposed installation entitled Mark's House designed by Two Islands for the Flint, Michigan public art competition for a temporary summer pavilion (2013).*

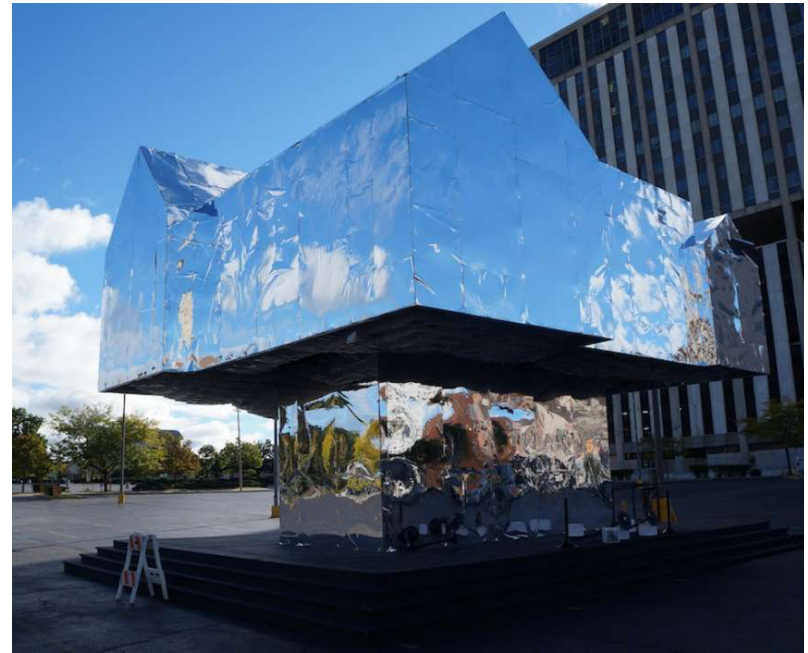


Figure 4.4- *Professional photograph of completed Mark's House installation in Flint, Michigan (2013).*



Figure 4.5- *Digital rendering of the proposed Elbe Philharmonic Hall in Hamburg, Germany designed by Herzog & de Meuron (2007).*



Figure 4.6- *Construction photo of the Elbe Philharmonic Hall (2011).*

Another controversial project can be found in the Hafencity quarter of Hamburg, Germany, where the Elbe Philharmonic Hall, designed by Herzog & de Meuron, has been under construction since April 2007. The project was first scheduled to be completed in 2010 for an estimated €241 million. However, after a series of issues in the planning and construction process that resulted in a number of building delays, the project is now slated for completion in January 2017 at a newly estimated €789 million, 7 years behind schedule and over three times the initial cost estimate. The hall was the focus of Herzog & de Meuron's installation at the 2012 Venice Architecture Biennale that was meant to draw attention to the politics and planning issues that can affect architectural projects through the use of "uncensored newspaper reports" that "[charted] the public opinion and debate surrounding the project."⁷ Similar to 'Mark's House' in Flint, the Elbe Philharmonic Hall has received international acclaim from numerous architecture media sources for its innovative design but for the citizens of Hamburg it is "an embarrassment that symbolizes political mismanagement on a spectacular scale."⁸

In addition to the planning and budget issues that have plagued the project since its construction began, an article on Archdaily questioned the obvious differences between the rendered façade and the built façade stating that "in renderings, the translucent articulated façade appears to be a seamless and almost weightless blanket" whereas "construction shots show that the multi-million dollar façade is not giving the same effect as the glassy waves shown in the renderings."⁹ In this case, the images, which have received international praise in the architecture and design communities, mask the "sensitive social and political repercussions"¹⁰ of the project and what it has come to symbolize for the citizens of Hamburg, a loss of "trust in the ability of those in power to pull off large-scale projects in a responsible manner."¹¹

Another online article published in February 2016 on the blog 'Failed Architecture,' points to the newly proposed Ravel Plaza in Amsterdam designed by MVRDV as an example of "unrealistic visuals and irrelevant writing."¹² Using a specific image from the project, the article discusses the potentially damaging effect of hyper-realistic rendering stating that "digital visualizations and hollow sales pitches hide the ugly sides of architecture and urban development."¹³

The artificial lighting used in the render belies the true reflective quality of glass so that, in reality, "the building will eventually look more like a mirroring lump"¹⁴ than like the beautifully lit, transparent block depicted in the image. Also called into question is the deliberate omission of handrails in the render which, for obvious safety reasons, will be included in the final construction of the project and will drastically alter the appearance of the lush, overflowing gardens; gardens which "will never come to look as lavish as they are projected"¹⁵ due to common factors that affect plant growth at higher elevations such as smog, high winds, and inadequate soil.

Most importantly, the author points out that the heavy emphasis on fantastic imagery and aesthetics "diminishes the societal relevance of the profession"¹⁶ and ignores the more important questions that should be asked: "do we really need this building? What issues are facing the city and how does this building contribute to solving them? Who's paying for it? Who's profiting from it? Who will be allowed to use and enjoy it? How affordable will the residential units be? How sustainable is its construction and use?"¹⁷

Because architecture is often presented to the public as a collection of utopian, dream-like images, it is often judged by more superficial criteria thereby circumventing the voice of a "well-informed, critical audience" that could potentially "enforce alterations or suggest better alternatives."¹⁸



Figure 4.7- *Digital rendering of the proposed Ravel Plaza project in Amsterdam designed by MVRDV (2015).*



Figure 4.8- 'Untitled #8' - A digitally manipulated image by photographer Filip Dujardin. 'Untitled #8' is part of Dujardin's series of images entitled 'Fictions' and was also featured in his 2013 exhibition entitled 'Impossible Architecture'.



Figure 4.9- 'D'ville 008' (2012)- A digitally manipulated image by photographer Filip Dujardin. 'D'ville 008' is part of Dujardin's series of images entitled 'Deauville' and was also featured in his 2013 exhibition entitled 'Impossible Architecture'.

It has been well-established that images are the architect's primary method of communicating ideas. As architect Belmont Freeman stated in his article 'Digital Deception,' "the idealized representation of unbuilt buildings is stock trade in the architectural profession, and architects and their hired hands are expected to produce seductive images of their projects to sell the designs to clients or to persuade the public." But with the creation of 3D modelling programs and rendering engines like Rhino, VRay, and 3D Studio Max along with popular photo manipulation software such as Photoshop and GIMP (GNU Image Manipulation Program), architects now have the unprecedented power to "realistically depict the impossible"¹⁹ and "create images of architecture that not only look like they could be built, but like they have already been built."²⁰ In his article, Belmont Freeman argues that this ability to create highly-idealized, photo-realistic imagery has transformed the role of architectural renders from "an exercise in persuasion" to an "an exercise in deception" as these images "[lead] clients and the public at large to expect from architecture and architects a degree of quality – perfection – that is impossible to deliver in the real world." As "the power of today's digital manipulation techniques

and the ease with which they are deployed"²¹ gives the architect the ability to "pass off an unresolved design proposal as real,"²² the profession of architecture is at risk of becoming less relevant through its reduction to a purely aesthetic role that does little to address the more troubling aspects of contemporary life.

Three Minutes to Midnight

Part Five

Through a series of architectural representations inspired by dystopian fictions, the following section is my attempt to imagine and represent the darker side of architecture and society. I began each illustration with a printed black and white photograph of a real architectural project and then layered ink, charcoal, and conté on top to create the desired effect. The majority of the base images are of Modernist housing estates in Paris and Spain built in the 1970s and 80s “to accommodate an increasing population of rural migrants and immigrants.”¹ I chose these projects and images specifically for their eerily empty atmospheres and alienating qualities that seemed to embody some of the darker and more intimidating aspects of dystopian fiction even before I began to alter them. But more than just being visually compelling, these projects are also representative of the failed ambitions of the Modernist utopian dream. Their “mass of unapologetic concrete”² and “uncanny grandeur”³ has created an atmosphere of alienation. Because of this, many of these buildings are now largely abandoned and have fallen into disrepair creating a haunting atmosphere that has made them the ideal settings for dystopian films like *Brazil* (1985) and, most recently, the *Hunger Games: Mockingjay Part 2* (2015).

The Machine Stops

E.M. Forster

“Cannot you see, cannot all you lecturers see, that it is we that are dying, and that down there the only thing that really lives is the Machine? We created the Machine, to do our will, but we cannot make it do our will now. It has robbed us of the sense of space and the sense of touch, it has blurred every human relation and narrowed down love to a carnal act, it has paralyzed our bodies and our wills, and now it compels us to worship it. The Machine develops – but not on our lines. The Machine proceeds – but not to our goal. We only exist as the blood corpuscles that course through its arteries, and if it could work without us, it would let us die.” (p. 21)

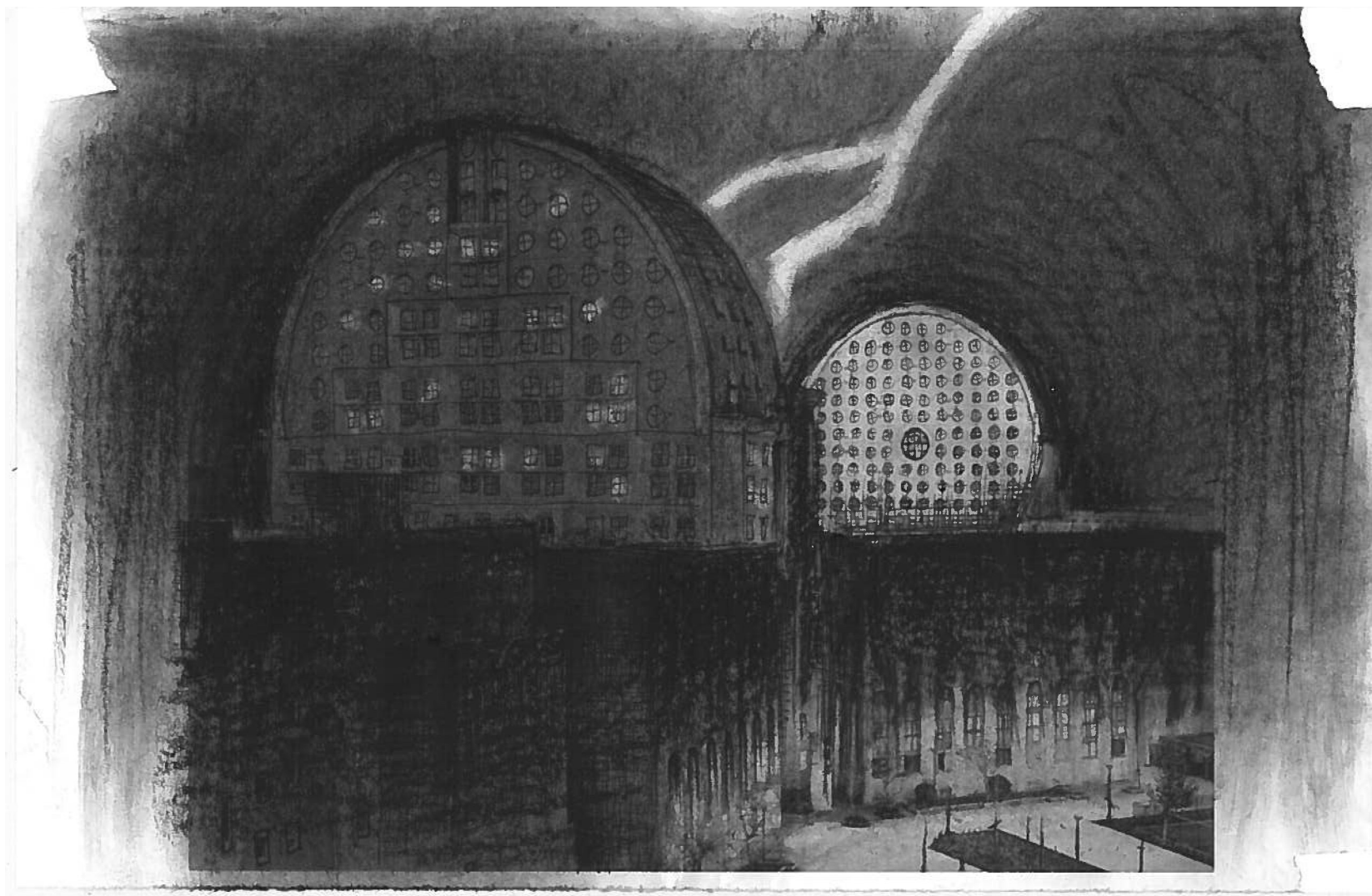


Figure 5.1

The Machine Stops

E.M. Forster

“‘The Machine,’ they exclaimed, ‘feeds us and clothes us and houses us; through it we speak to one another, through it we see one another, in it we have our being. The Machine is the friend of ideas and the enemy of superstition: the Machine is omnipotent, eternal; blessed is the Machine.’” (p. 26)

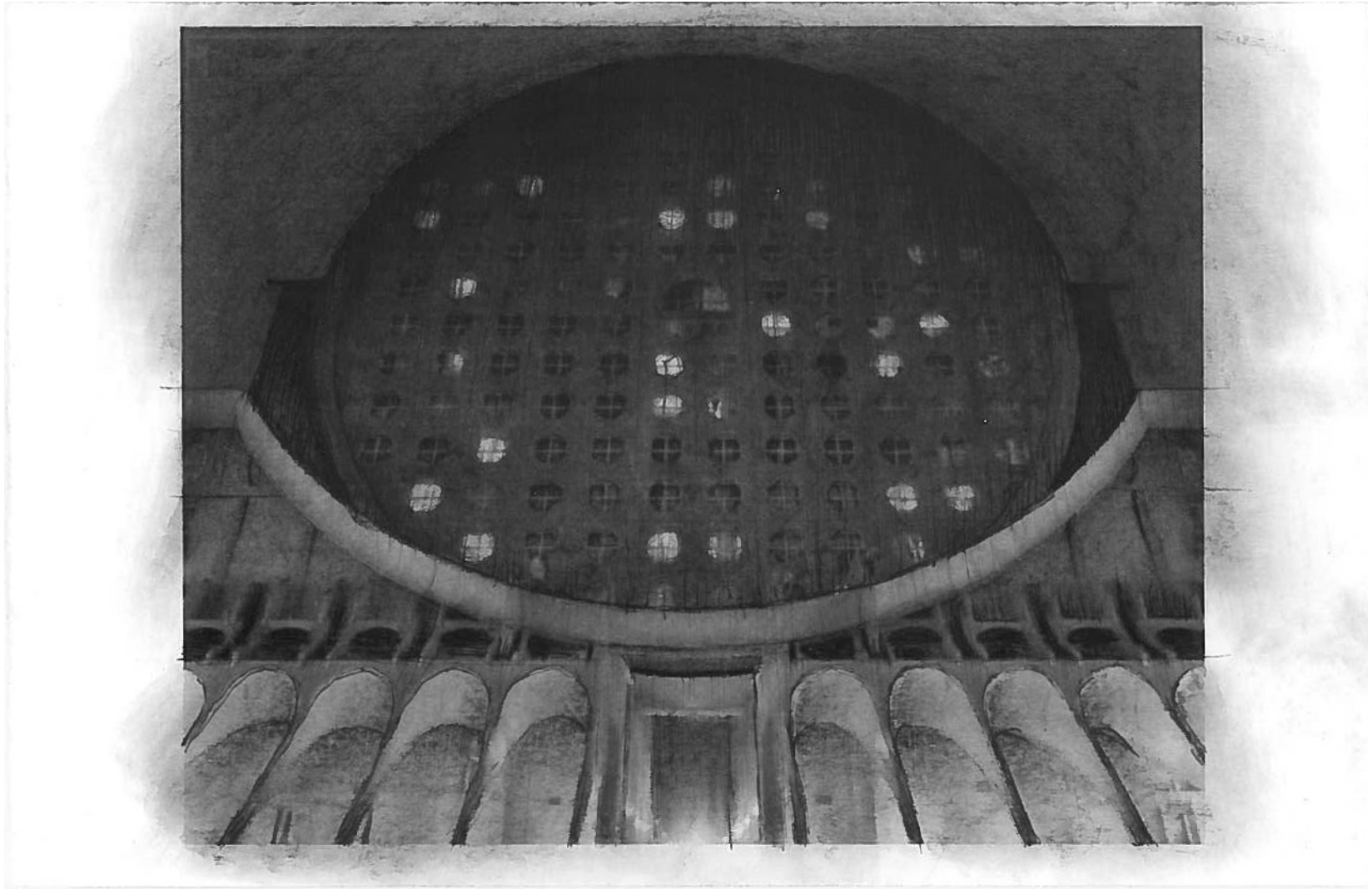


Figure 5.2

We

Yevgeny Zamyatin

“But the Table of Hours – it transforms each of us into the real-life, six-wheeled, steel heroes of a great epic. Each morning, with six-wheeled precision, at the exact same hour, at the exact same minute, we, the millions, rise as one. At the exact same hour, we uni-millionly start work and uni-millionly stop work. And, merged into a single, million-handed body, at the exact same Table-appointed second, we bring spoons to our lips, we go out for our walk and go to the auditorium, to the Taylor Exercise Hall, go off to sleep...” (p. 13)

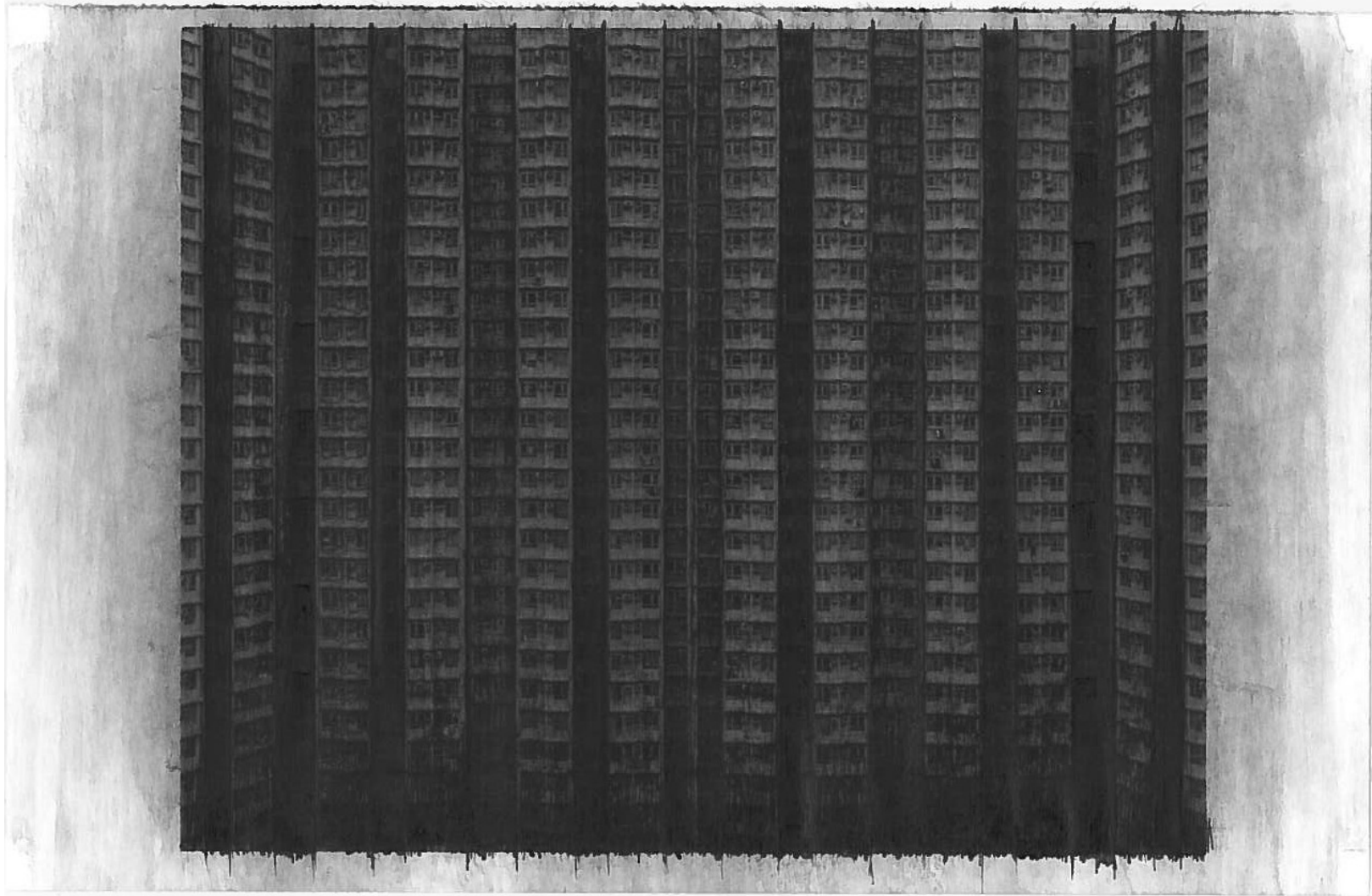


Figure 5.3

We

Yevgeny Zamyatin

“The small, bright, crystal bell in the bed’s headboard rings: 07:00. It’s time to get up. On the right, on the left, through the glass walls, it’s as if I’m seeing myself, my room, my nightshirt, my motions, repeating themselves a thousand times. This cheers me up: one sees oneself as part of an enormous, powerful unit. And such precise beauty: not one extraneous gesture, twist, or turn.” (p. 31)



Figure 5.4

We

Yevgeny Zamyatin

“But happily, between me and this wild, green ocean was the glass of the Wall. Oh, the great, divinely bounding wisdom of walls and barriers! They may just be the greatest of all inventions. Mankind ceased to be wild beast when it built its first wall. Mankind ceased to be savage when we built the Green Wall when we isolated our perfect, machined world, by means of the Wall, from the irrational, chaotic world of the trees, birds, animals...” (p. 83)

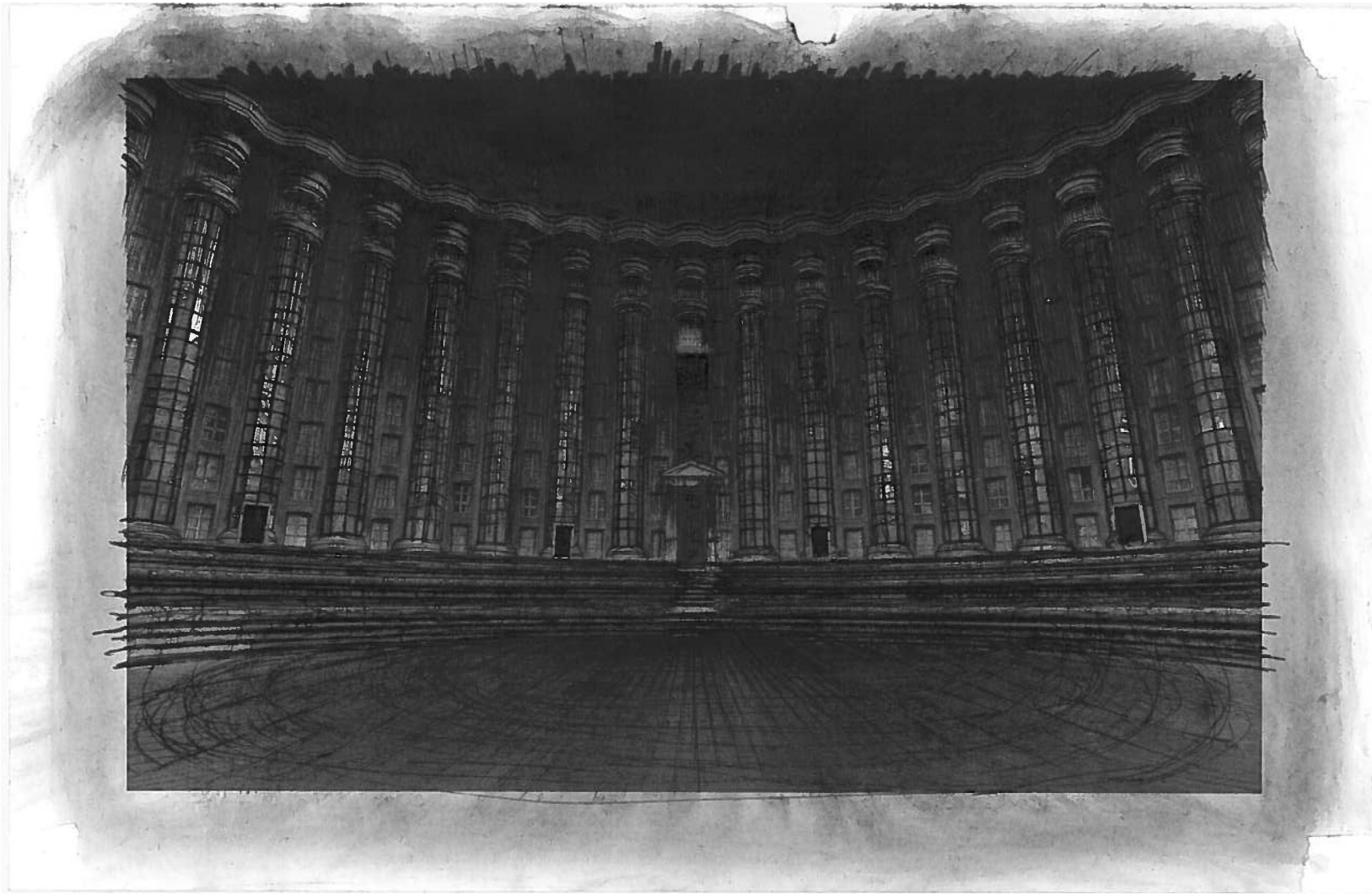


Figure 5.5

Nineteen Eighty-Four

George Orwell

“The ideal set up by the Party was something huge, terrible, and glittering – a world of steel and concrete, of monstrous machines and terrifying weapons – a nation of warriors and fanatics, marching forward in perfect unity, all thinking the same thoughts and shouting the same slogans, perpetually working, fighting, triumphing, persecuting – three hundred million people all with the same face. The reality was decaying, dingy cities where underfed people shuffled to and fro in leaky shoes, in patched-up nineteenth century houses that smelt always of cabbage and bad lavatories. He seemed to see a vision of London, vast and ruinous, city of a million dustbins, and mixed up with it was a picture of Mrs Parsons, a woman with lined face and wispy hair, fiddling helplessly with a blocked waste-pipe.” (p. 62-3)



Figure 5.6

Do Androids Dream of Electric Sheep?

Philip K. Dick

“Silence. It flashed from the woodwork and the walls; it smote him with an awful, total power, as if generated by a vast mill. It rose from the floor, up out of the tattered gray wall-to-wall carpeting. It unleashed itself from the broken and semi-broken appliances in the kitchen, the dead machines which hadn’t worked in all the time Isidore had lived here. From the useless pole lamp in the living room it oozed out, meshing with the empty and wordless descent of itself from the fly-specked ceiling. It managed in fact to emerge from every object within his range of vision, as if it—the silence—meant to supplant all things tangible. Hence it assailed not only his ears but his eyes; as he stood by the inert TV set he experienced the silence as visible and, in its own way, alive. Alive! He had often felt its austere approach before; when it came it burst in without subtlety, evidently unable to wait. The silence of the world could not rein back its greed. Not any longer. Not when it had virtually won.” (p. 16)

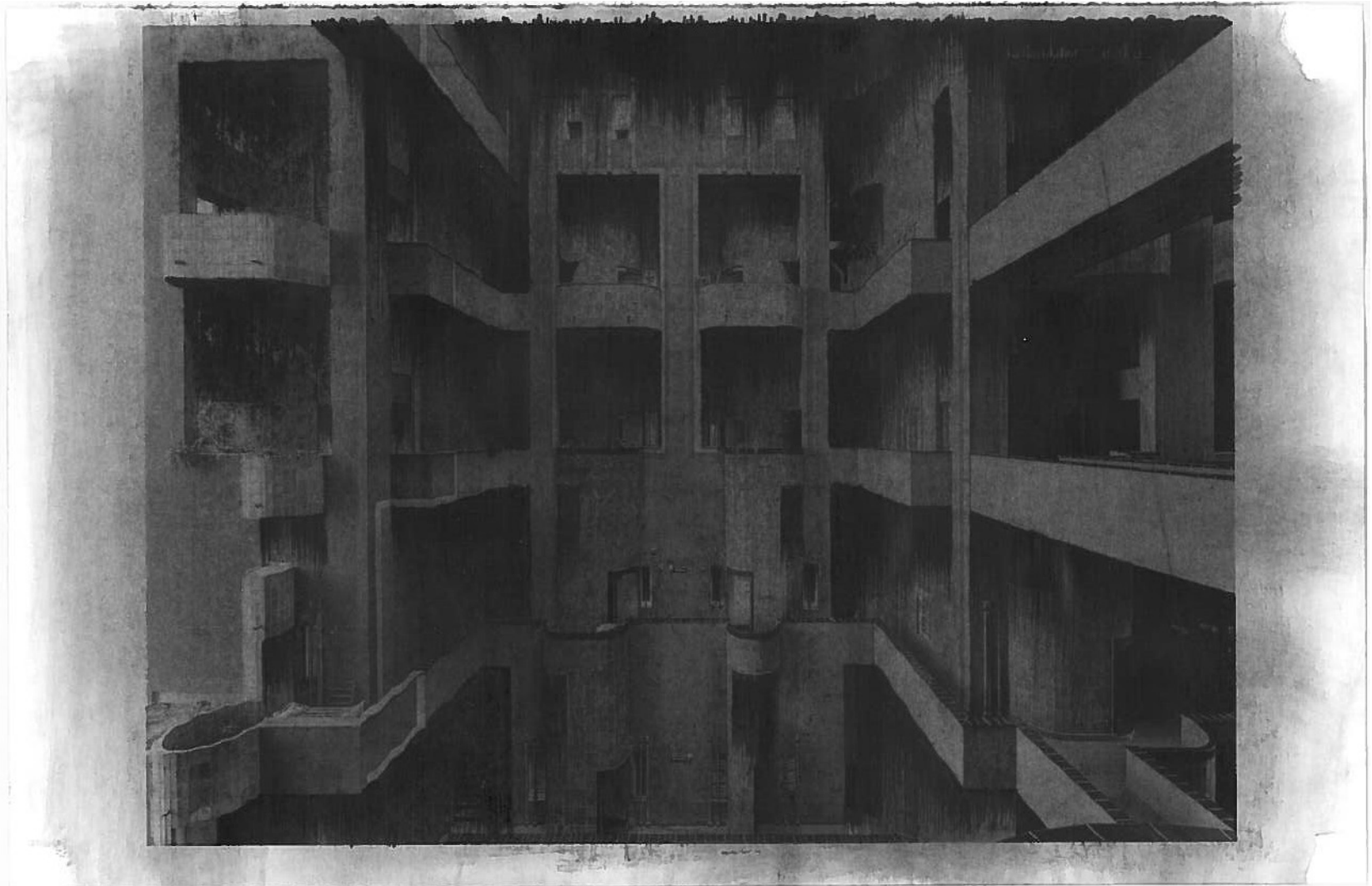


Figure 5.7

High-Rise

J.G. Ballard

“At first Laing found something alienating about the concrete landscape of the project - an architecture designed for war, on the unconscious level if no other.” (p. 10)



Figure 5.8

High-Rise

J.G. Ballard

“By its very efficiency, the high-rise took over the task of maintaining the social structure that supported them all. For the first time it removed the need to repress every kind of anti-social behaviour, and left them free to explore any deviant or wayward impulses. It was precisely in these areas that the most important and most interesting aspects of their lives would take place. Secure within the shell of the high-rise like passengers on board an automatically piloted air-liner, they were free to behave in any way they wished, explore the darkest corners they could find. In many ways, the high-rise was a model of all that technology had done to make possible the expression of a truly ‘free’ psychopathology.” (p. 43)



Figure 5.9

High-Rise

J.G. Ballard

“For some time now he had known that he was developing a powerful phobia about the high-rise. He was constantly aware of the immense weight of concrete stacked above him, and the sense that his body was the focus of the lines of force running through the building, almost as if Anthony Royal had deliberately designed his body to be held within their grip. At night, as he lay beside his sleeping wife, he would often wake from an uneasy dream into the suffocating bedroom, conscious of each of the 999 other apartments pressing on him through the walls and ceiling, forcing the air from his chest.” (p. 58)

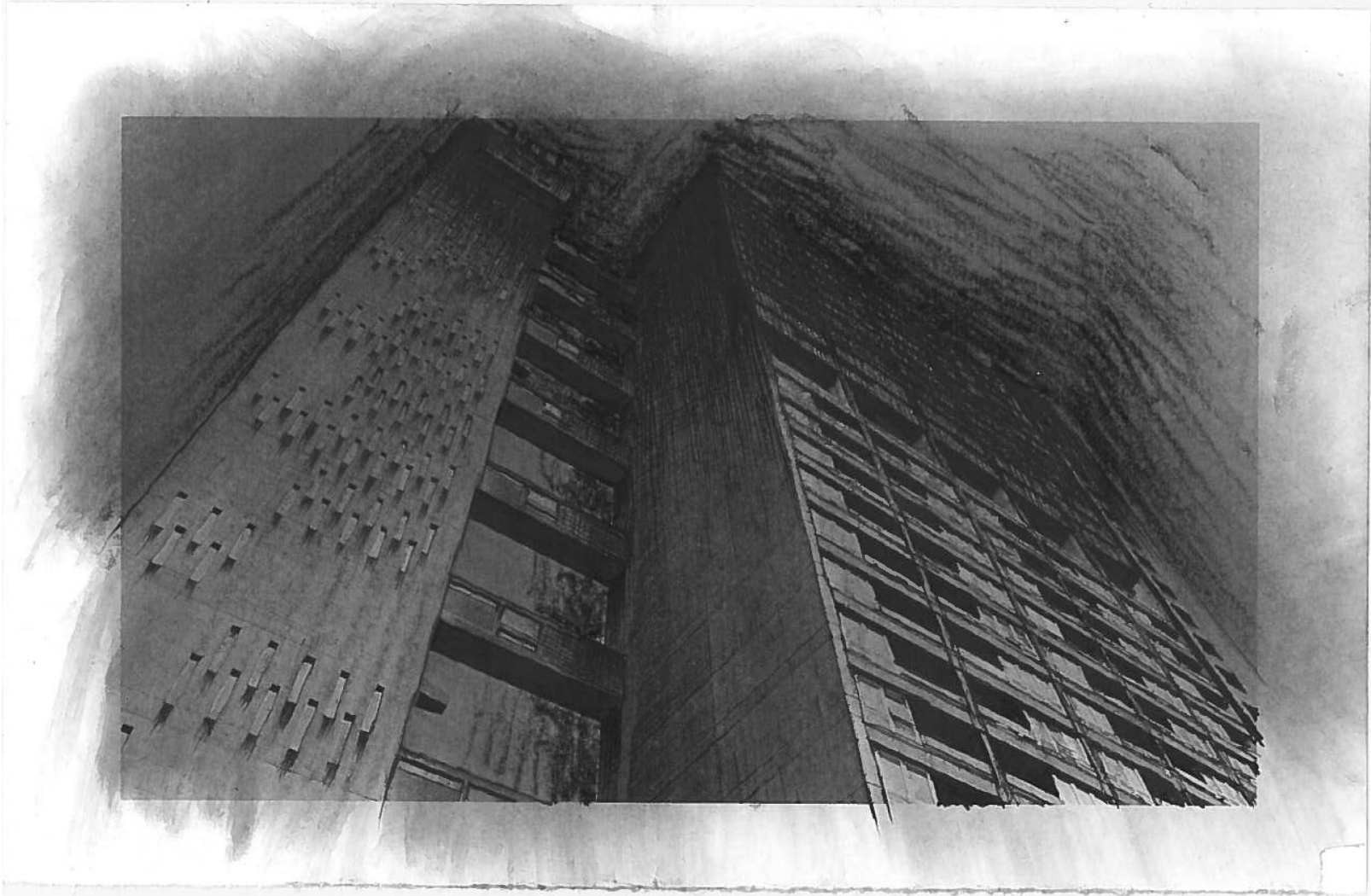


Figure 5.10

High-Rise

J.G. Ballard

“Nonetheless, Wilder welcomed and understood the night – only in the darkness could one become sufficiently obsessive, deliberately play on all one’s repressed instincts. He welcomed this forced conscription of the deviant strains in his character. Happily, this free and degenerate behaviour became easier the higher he moved up the building, as if encouraged by the secret logic of the high-rise.” (p. 142)

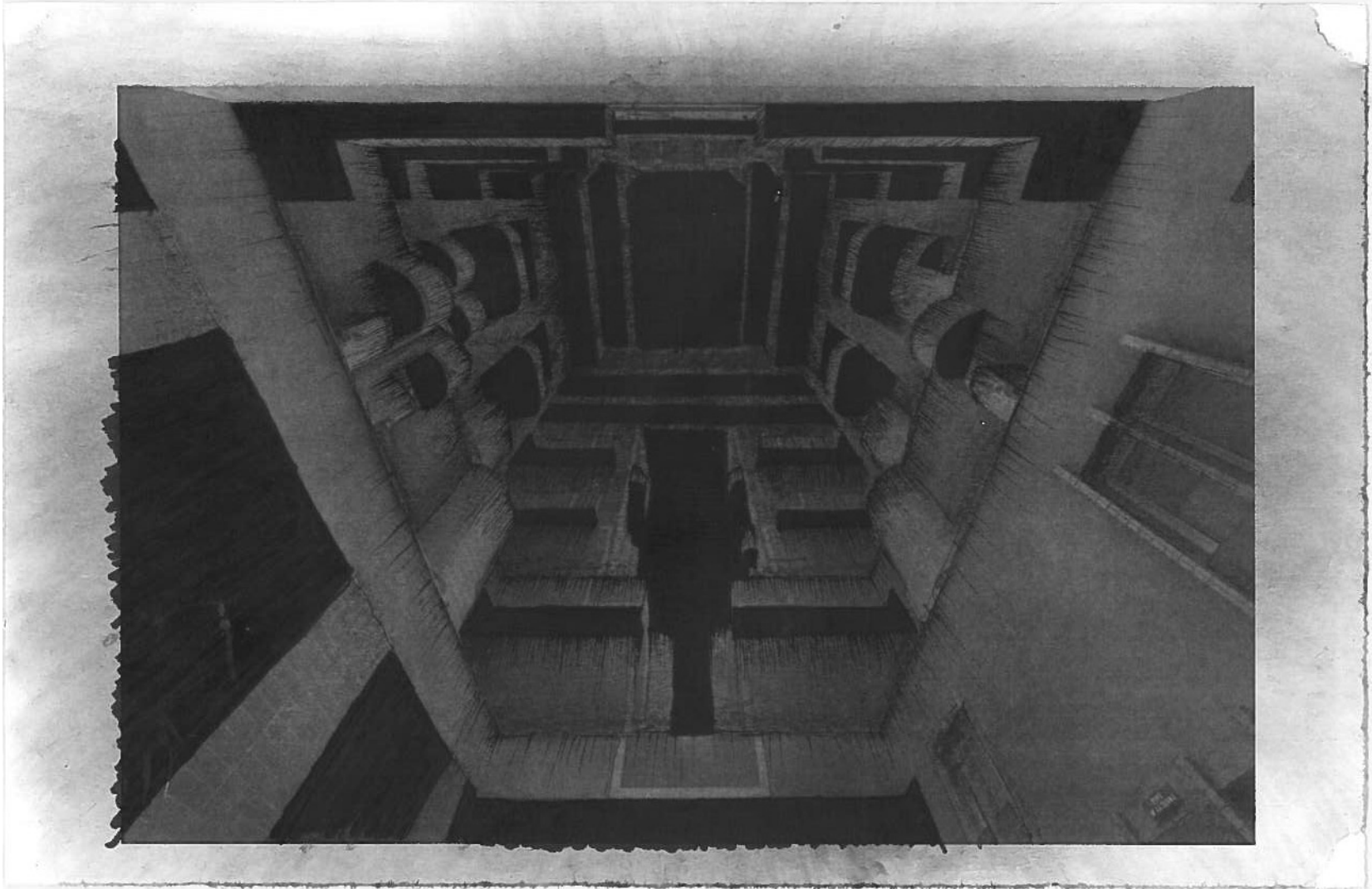


Figure 5.11

WOOL

Hugh Howey

“The descent was like the uncoiling of a steel spring, pushing her down. It reminded Jahns of nightmares she’d had of drowning. Silly nightmares, considering she’d never seen enough water to submerge herself in, much less enough that she couldn’t stand up to breathe. But they were like the occasional dreams of falling from great heights, some legacy of another time, broken fragments unearthed in each of their sleeping minds that suggested: *We weren’t supposed to live like this*. And so the descent, this spiraling downward, was much like the drowning that swallowed her at night. It felt inexorable and inextricable. Like a weight pulling her down combined with the knowledge that she’d never be able to claw her way back up.” (p. 54)

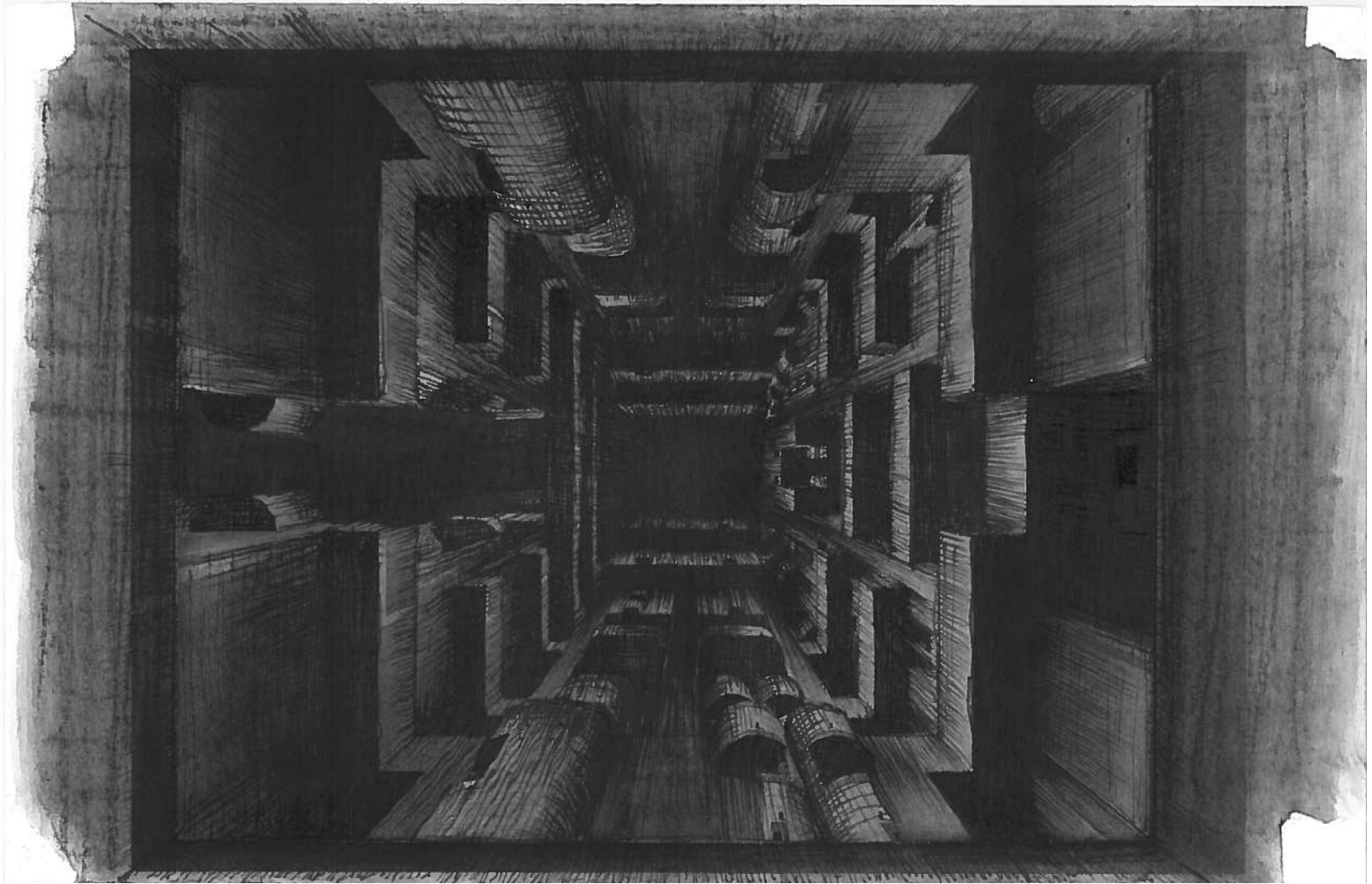


Figure 5.12

The Circle

Dave Eggers

“Her hometown, and the rest of California, the rest of America, seemed like some chaotic mess in the developing world. Outside the walls of the Circle, all was noise and struggle, failure and filth. But here, all had been perfected. The best people had made the best systems and the best systems had reaped funds, unlimited funds, that made possible this, the best place to work. And it was natural that it was so, Mae thought. Who else but utopians could make utopia?”

(p. 31)



Figure 5.13

The Circle

Dave Eggers

“Increasingly, she found it difficult to be off-campus anyway. There were homeless people, and there were the attendant and assaulting smells, and there were machines that didn’t work, and floors and seats that had not been cleaned, and there was, everywhere, the chaos of an orderless world. The Circle was helping to improve it, she knew, and so many of these things were being addressed – homelessness could be helped or fixed, she knew, once the gamification of shelter allotment and public housing in general was complete; they were working on this in the Nara Period – but in the meantime, it was increasingly troubling to be amid the madness outside the gates of the Circle. Walking through San Francisco, or Oakland, or San Jose, or any city, really, seemed more and more like a Third World experience, with unnecessary filth, and unnecessary strife and unnecessary errors and inefficiencies – on any city block, a thousand problems correctible through simple enough algorithms and the application of available technology and willing members of the digital community.” (p. 373-4)



Figure 5.14

Conclusion

As I began to tie up the loose ends of this thesis, I received a link to an online article from a friend about a co-living project in London, UK called the Collective Old Oak. The project, an 11-storey 550-bedroom building, is intended to create a more “sociable lifestyle” for a younger generation at an affordable price and boasts a long list of amenities including a “co-working space, with a restaurant, gym, spa and laundrette.”¹

But what really caught my attention were the following quotes by Reza Merchant, CEO of the company behind the development of the project, in an interview for the article:

“In theory you wouldn’t have to leave the building if you didn’t want to, because you have everything at your fingertips.”

“We see the need to essentially have everything that you could possibly need while living in this building.”

“Convenience is so important. Nowadays, people are just used to everything at a touch of a button. It’s essential to provide that same convenience and immediacy in the places where people live.”

I have read and re-read this article many times and each time I read those quotes I am reminded of the many dystopian stories that influenced this thesis. The conviction with which Merchant speaks of convenience within our living spaces is eerily reminiscent of the convenience promised by E.M. Forester’s Machine. The

long list of amenities creating a virtually self-contained living situation sounds hauntingly similar to J.G. Ballard’s High-Rise.

When I first began this thesis two years ago, I had no clue what its final form would be or look like. It has grown, changed, and evolved many times throughout this process. I’ve often joked that this thesis was an excuse to indulge my obsession with reading but of course it’s much more than that. For me, this thesis began as a way of exploring a darker side of architecture that, in my experience, is seldom addressed or discussed; to understand that because we, as imperfect humans, have the capacity to harm so too does the architecture that we create. What I believe dystopian fiction, in its role as social critic, can offer to architecture and society in general is an alternative method of critically examining both our collective utopian drive for a better world and the unpredictability of reality in order to help us make better informed and more intelligent decisions for our future. With the proliferation of highly-idealized imagery threatening to reduce the role of architecture to pure aesthetics, I believe that the critical views of society offered in dystopian fiction, in combination with alternative methods of architectural representation, can help us better understand the darker and more unpredictable side of contemporary society that traditional architectural representation seldom addresses.

Notes

Part One

- 1 Kurzweil, Ray, "The Law of Accelerating Returns," *Kurzweil Accelerating Intelligence*, accessed on march 19, 2016, <http://www.kurzweilai.net/the-law-of-accelerating-returns>
- 2 Walsh, Chad. *From Utopia to Nightmare*. (London: Geoffrey Bles, 1962) 15.
- 3 Aldridge, Alexandra. *The Scientific World View in Dystopia* (Ann Arbor, Michigan: UMI Research Press, 1984) 8.
- 4 Booker, M. K. Introduction to *Dystopian Literature: A Theory and Research Guide* (Westport, Conn.: Greenwood Press, 1994) 3.
- 5 *Oxford English Dictionary*, s.v. "utopia," accessed on April 21, 2016, <http://www.oed.com/view/Entry/220784?redirectedFrom=utopia#eid>
- 6 Sterling, Bruce, "Science Fiction," *Encyclopedia Britannica Online*, accessed on April 21, 2016, <http://www.britannica.com/art/science-fiction/SF-cinema-and-TV#toc235726>
- 7 *Oxford English Dictionary*, s.v. "dystopia," accessed on April 21, 2016, <http://www.oed.com/view/Entry/58909?redirectedFrom=dystopia#eid>
- 8 *New World Encyclopedia*, s.v. "Dystopia," accessed on February 9, 2016, <http://www.newworldencyclopedia.org/entry/Dystopia>
- 9 Mill, John Stuart, "Speech on Mr. Maguire's Motion on the State of Ireland" in *The Irish Land Question* (London: Longmans, Green, Reader, and Dyer, 1870) 109.
- 10 Ibid, 5.
- 11 Walsh, Chad. *From Utopia to Nightmare*. (London: Geoffrey Bles, 1962) 70.
- 12 Ibid.
- 13 Ibid, 71.
- 14 Ibid, 72.
- 15 Ibid, 77.
- 16 Hillegas, Mark R. *The Future as Nightmare: H. G. Wells and the anti-Utopians* (Carbondale, Illinois: Southern Illinois University Press, 1974) 86.
- 17 Ibid, 85.
- 18 Forster, E.M., "The Machine Stops," in *Strange Universe: An Anthology of Science Fiction*, comp. Amabel Williams-Ellis, Michael Pearson (Glasgow: Blackie & Son Limited, 1974) 148.
- 19 Ibid, 180.
- 20 Ibid, 181.
- 21 Hillegas, Mark R. *The Future as Nightmare: H. G. Wells and the anti-Utopians* (Carbondale, Illinois: Southern Illinois University Press, 1974) 90.
- 22 Forster, E.M., "The Machine Stops," in *Strange Universe: An Anthology of Science Fiction*, comp. Amabel Williams-Ellis, Michael Pearson (Glasgow: Blackie & Son Limited, 1974) 181.
- 23 Ibid.
- 24 Ibid.
- 25 Walsh, Chad. *From Utopia to Nightmare*. (London: Geoffrey Bles, 1962) 98.
- 26 Ibid, 100.
- 27 Ibid, 99.
- 28 Ibid, 73.
- 29 Ibid, 31.
- 30 Ibid, 3.
- 31 Ibid, 121.
- 32 Ibid.
- 33 Ibid.
- 34 Ibid.
- 35 Ibid, 40.
- 36 Ibid, 203.

- 37 Ibid.
- 38 Ibid.
- 39 Walsh, Chad. *From Utopia to Nightmare*. (London: Geoffrey Bles, 1962) 98.
- 40 Ibid.
- 41 Ibid.
- 42 Ibid.
- 43 Ibid, 100.
- 44 Ibid, 104.
- 45 Margaret Atwood, "When Privacy is Theft," *The New York Review of Books*, accessed on March 26, 2016, <http://www.nybooks.com/articles/2013/11/21/eggess-circle-when-privacy-is-theft/>
- 46 Ibid.
- 47 Susannah Luthi, "Brainwash, Condition, Repeat: Dave Eggers' 'The Circle,'" *Los Angeles Review of Books*, accessed on March 31, 2016, <http://lareviewofbooks.org/article/dave-eggess-the-circle>
- 48 Scott Timber, "It's time to reread Dave Eggers' 'The Circle': Why his under-appreciated Silicon Valley workplace novel resonates now more than ever," *Salon*, accessed on March 26, 2016, http://www.salon.com/2015/08/19/its_time_to_reread_dave_eggess_the_circle_why_his_under_appreciated_silicon_valley_workplace_novel_resonates_now_more_than_ever/
- 49 Eggers, Dave, *The Circle* (Toronto: Vintage Canada, 2014) 241.
- 50 Ibid.
- 51 Ibid, 395.
- 52 Ibid, 497.
- 53 Ibid.
- 54 Ibid.
- 55 Scott Timber, "It's time to reread Dave Eggers' 'The Circle': Why his under-appreciated Silicon Valley workplace novel resonates now more than ever," *Salon*, accessed on March 26, 2016, http://www.salon.com/2015/08/19/its_time_to_reread_dave_eggess_the_circle_why_his_under_appreciated_silicon_valley_workplace_novel_resonates_now_more_than_ever/
- 56 Edward Doex, "The Circle by Dae Eggers – review," *The Guardian*, accessed on April 1, 2016, <http://www.theguardian.com/books/2013/oct/09/circle-dave-eggess-review>
- 57 Eggers, Dave, *The Circle* (Toronto: Vintage Canada, 2014) 434.
- 58 Scott Timber, "It's time to reread Dave Eggers' 'The Circle': Why his under-appreciated Silicon Valley workplace novel resonates now more than ever," *Salon*, accessed on March 26, 2016, http://www.salon.com/2015/08/19/its_time_to_reread_dave_eggess_the_circle_why_his_under_appreciated_silicon_valley_workplace_novel_resonates_now_more_than_ever/
- 59 Ellen Ulman, "Ring of Power: 'The Circle,' by Dave Eggers," *New York Times*, accessed on March 26, 2016, http://www.nytimes.com/2013/11/03/books/review/the-circle-by-dave-eggess.html?_r=1
- 60 Scott Timber, "It's time to reread Dave Eggers' 'The Circle': Why his under-appreciated Silicon Valley workplace novel resonates now more than ever," *Salon*, accessed on March 26, 2016, http://www.salon.com/2015/08/19/its_time_to_reread_dave_eggess_the_circle_why_his_under_appreciated_silicon_valley_workplace_novel_resonates_now_more_than_ever/
- 61 Walsh, Chad. *From Utopia to Nightmare*. (London: Geoffrey Bles, 1962) 117.
- 62 Ibid, 123.
- 63 Ibid, 117.
- 64 Ibid, 69.
- 65 Ibid, 123.
- 66 Ibid, 118.
- 67 Ibid, 177.
- 68 Ibid.
- 69 Ibid.
- 70 Ibid, 178.

Part Two

- 1 *Library of Congress*, s.v. “Progressive Era to New Era 1900-1929,” accessed on April 25, 2016, <http://www.loc.gov/teachers/classroommaterials/presentationsandactivities/presentations/timeline/progress/cities/>
- 2 Bairoch, Paul and Gary Goertz, “Factors of Urbanization in the Nineteenth Century Developed Countries: A Descriptive and Econometric Analysis” in *Urban Studies*, (1986) 286.
- 3 *The USA Online*, s.v. “Urbanization of America,” accessed on April 25, 2016, <http://www.theusaonline.com/people/urbanization.htm>
- 4 *Library of Congress*, s.v. “Rise of Industrial America 1876-1900,” accessed on April 25, 2016, <http://www.loc.gov/teachers/classroommaterials/presentationsandactivities/presentations/timeline/riseind/city/>
- 5 Howard, Ebenezer. *Garden Cities of Tomorrow* (London: Faber and Faber Ltd, [1902] 1945)
- 6 Ibid.
- 7 Ellis Calvin, “The Natural City”, *Hypocrite Reader*, accessed on March 10, 2016, <http://www.hypocritereader.com/3/the-natural-city>
- 8 Ibid.
- 9 Ibid.
- 10 Jacobs, Jane. *The Death and Life of Great American Cities* (New York: Vintage Books, 1992) 17.
- 11 Ibid.
- 12 Matt Novak, “Broadacre City: Frank Lloyd Wright’s Unbuilt Suburban Utopia”, accessed on March 15, 2016, <http://paleofuture.gizmodo.com/broadacre-city-frank-lloyd-wrights-unbuilt-suburban-ut-1509433082>
- 13 Ibid.
- 14 Ibid.
- 15 Anna Kats, Dion Tan, “What Might Have Been: Frank Lloyd Wright’s Strange Urban Vision at MoMA”, *Blouin Art Info*, accessed on March 20, 2016, <http://www.blouinartinfo.com/news/story/1006695/what-might-have-been-frank-lloyd-wrights-strange-urban-vision>
- 16 Ward, Stephen, *The Garden City: Past, Present and Future* (New York: Routledge, 1992) 205.
- 17 Ibid.
- 18 Leigh Gallagher, “The End of the Suburbs,” *Time*, accessed on July 18, 2016, <http://ideas.time.com/2013/07/31/the-end-of-the-suburbs/>
- 19 Leonardo R. Grabkowski, “Negative Effects of Urban Sprawl,” *San Francisco Gate*, accessed on July 18, 2016, <http://homeguides.sfgate.com/negative-effects-urban-sprawl-1716.html>
- 20 Leonardo R. Grabkowski, “Negative Effects of Urban Sprawl,” *San Francisco Gate*, accessed on July 18, 2016, <http://homeguides.sfgate.com/negative-effects-urban-sprawl-1716.html>
- 21 *Oxford English Dictionary*, s.v. “white flight,” accessed on July 18, 2016, <http://www.oed.com/view/Entry/228566?redirectedFrom=white+flight#eid14365982>
- 22 Soule, David C. *Urban Sprawl: A Comprehensive Reference Guide*. (Westport, Connecticut: Greenwood Publishing Group, 2006) 7.
- 23 Gili Merin, “AD Classics: Ville Radieuse/Le Corbusier”, *Archdaily*, accessed on March 16, 2016, <http://www.archdaily.com/411878/ad-classics-ville-radieuse-le-corbusier>
- 24 Le Corbusier. *The Radiant City: Elements of a Doctrine of Urbanism to be Used as the Basis of our Machine-age Civilization*. (New York: Orion Press, 1967) 94.
- 25 Ibid, 92.
- 26 Ibid.
- 27 Le Corbusier. *The Radiant City: Elements of a Doctrine of Urbanism to be Used as the Basis of our Machine-age Civilization*. (New York: Orion Press, 1967)
- 28 Gili Merin, “AD Classics: Ville Radieuse/Le Corbusier”, *Archdaily*, accessed on March 16, 2016, <http://www.archdaily.com/411878/ad-classics-ville-radieuse-le-corbusier>
- 29 Le Corbusier. *The Radiant City: Elements of a Doctrine of Urbanism to be Used as the Basis of our Machine-age Civilization*. (New York: Orion Press, 1967), 273.
- 30 Ibid, 240.
- 31 Le Corbusier. *The Radiant City: Elements of a Doctrine of Urbanism to be Used as the Basis of our Machine-age Civilization*. (New York: Orion Press, 1967)

- 32 Ibid, 94.
- 33 Ibid, 142.
- 34 Robin Banerji, "Niemeyer's Brasilia: Does it Work as a City?" *BBC News*, accessed on March 16, 2016, <http://www.bbc.com/news/magazine-20632277>
- 35 Ibid.
- 36 United Nations Educational, Scientific, and Cultural Organization (UNESCO), "Brasilia," *UNESCO*, accessed on March 16, 2016, <http://whc.unesco.org/en/list/445>
- 37 Fernando Lara, Stella Nair, "The Brazilianization of Brasilia", *The Journal of the International Institute*, accessed on March 16, 2016, <http://quod.lib.umich.edu/j/i/ji/4750978.0014.214/--brazilianization-of-brasilia?rgn=main;view=fulltext>
- 38 Alan Riding, "Brasilia: A City of the Future Grapples with a Troubled Present," *New York Times*, accessed on March 16, 2016, <http://www.nytimes.com/1988/01/03/arts/brasilia-a-city-of-the-future-grapples-with-a-troubled-present.html>
- 39 Ibid.
- 40 Robin Banerji, "Niemeyer's Brasilia: Does it Work as a City?" *BBC News*, accessed on March 16, 2016, <http://www.bbc.com/news/magazine-20632277>
- 41 Ibid.
- 42 *The Pruitt-Igoe Myth: An Urban History*, directed by Chad Friedrichs (2011; New York: First Run Features, 2012) DVD.
- 43 Rowan Moore, "Pruitt-Igoe: death of the American urban dream," *The Guardian*, accessed on July 6, 2016, <https://www.theguardian.com/artanddesign/2012/feb/26/pruitt-igoe-myth-film-review>
- 44 Sara Fernandez Cendon, "Pruitt-Igoe 40 Years Later," *The American Institute of Architects*, accessed on July 6, 2016, <http://www.aia.org/practicing/AIAB092656>
- 45 Newman, Oscar, *Creating Defensible Space* (Darby, Pennsylvania: Diane Publishing Company, 1996) 11.
- 46 Newman, Oscar, *Creating Defensible Space* (Darby, Pennsylvania: Diane Publishing Company, 1996) 11.
- 47 Rowan Moore, "Pruitt-Igoe: death of the American urban dream," *The Guardian*, accessed on July 6, 2016, <https://www.theguardian.com/artanddesign/2012/feb/26/pruitt-igoe-myth-film-review>

- 48 *The Pruitt-Igoe Myth: An Urban History*, directed by Chad Friedrichs (2011; New York: First Run Features, 2012) DVD.
- 49 Ibid.
- 50 Ibid.
- 51 Ibid.
- 52 Jencks, Charles, *The Language of Post-Modern Architecture* (London: Academy Editions, 1977) 9.

Part Three

- 1 Woods, Lebbeus. *Anarchitecture: Architecture is a Political Act* (London: Academy Editions, 1992), 9.
- 2 Ibid.
- 3 Ibid, 12.
- 4 Ibid.
- 5 Woods, Lebbeus. *Radical Reconstruction* (New York: Princeton Architectural Press, 1997), 18.
- 6 Ibid.
- 7 Ibid.
- 8 Ibid, 19.
- 9 Ibid, 19.
- 10 Lebbeus Woods, "UNDERGROUND BERLIN: The Film Treatment", *Lebbeus Woods*, September 2009, <https://lebbeuswoods.wordpress.com/2009/09/15/underground-berlin-the-film-treatment/>
- 11 Ibid.
- 12 Ibid.
- 13 Ibid.
- 14 Woods, Lebbeus. "An Essay for Thom Mayne." Essay written for the Pritzker Architecture Prize, 2005.

- 15 Jonathan Glancey, "Anti-matter", *The Guardian*, March 2003, <http://www.theguardian.com/artanddesign/2003/mar/31/architecture.artsfeatures>
- 16 Canadian Architect, "A Stable World That will Last Forever on View in Vancouver", *Canadian Architect*, February 2015, <https://www.canadianarchitect.com/architecture/a-stable-world-that-will-last-forever-on-view-in-vancouver/1003506252/>
- 17 Jonathan Glancey, "Anti-matter", *The Guardian*, March 2003, <http://www.theguardian.com/artanddesign/2003/mar/31/architecture.artsfeatures>
- 18 Ibid.
- 19 Ibid.
- 20 Frances Anderton, "Space Odyssey," *Dwell*, (2006) 167.
- 21 Crompton, Dennis, Archigram Archives, eds. *A Guide to Archigram 1961-74*, trans. Irene Aeberli et al. (New York: Princeton Architectural Press, 2012) 25.
- 22 Ibid, 41-42.
- 23 Kim, Jeoung-eun, Hyouk-joon Kim, *Dance with Archigram* (Seoul: APACE, 2005) 91.
- 24 Ibid, 22.
- 25 Crompton, Dennis, Archigram Archives, eds. *A Guide to Archigram 1961-74*, trans. Irene Aeberli et al. (New York: Princeton Architectural Press, 2012) 23.
- 26 Kim, Jeoung-eun, Hyouk-joon Kim, *Dance with Archigram* (Seoul: APACE, 2005) 93.
- 27 Work Architecture Company. *49 Cities*. (New York: Storefront for Art and Architecture, 2010) 117.
- 28 Crompton, Dennis, Archigram Archives, eds. *A Guide to Archigram 1961-74*, trans. Irene Aeberli et al. (New York: Princeton Architectural Press, 2012) 72.
- 29 Ibid.
- 30 Ibid, 76.
- 31 Sadler, Simon. *Archigram: Architecture without Architecture* (Cambridge, Mass.: MIT Press, 2005) 55.

- 32 Ibid.
- 33 Ibid.
- 34 Kim, Jeoung-eun, Hyouk-joon Kim, *Dance with Archigram* (Seoul: APACE, 2005) 114.
- 35 Ibid, 168.
- 36 Banham, Reyner. *The Visions of Ron Herron*. Architectural Monographs (New York: St. Martin's Press, 1994) 75.
- 37 Ibid.
- 38 Crompton, Dennis, Archigram Archives, eds. *A Guide to Archigram 1961-74*, trans. Irene Aeberli, Katherine Brünagel, Philip Mann, Christian Steiner, Camilla Nielsen, Chris Charlesworth (New York: Princeton Architectural Press, 2012) 131.
- 39 Ibid.
- 40 Ibid.
- 41 Adelyn Perez, "AD Classics: Centre Georges Pompidou/Richard Rogers + Renzo Piano," *Archdaily*, accessed on July 11, 2016, <http://www.archdaily.com/64028/ad-classics-centre-georges-pompidou-renzo-piano-richard-rogers>

Part Four

- 1 Belmont Freeman, "Digital Deception", *Places Journal*, May 2013, <https://placesjournal.org/article/digital-deception/>
- 2 Lamar Anderson, "Do Architecture Photos Lie?", *Architizer*, October 8, 2013, <http://architizer.com/blog/do-architecture-photos-lie/>
- 3 Heather Carlsen, "Two Islands' Award-winning Mark's House Complete in Michigan," *designboom*, September 10, 2013, <http://www.designboom.com/architecture/two-islands-award-winning-marks-house-complete-in-michigan/>
- 4 Mort d'Urban, September 10, 2013, comment on Heather Carlsen, "Two Islands' Award-winning Mark's House Complete

- in Michigan,” *designboom*, September 10, 2013, <http://www.designboom.com/architecture/two-islands-award-winning-marks-house-complete-in-michigan/>
- 5 Heather Carlsen, “Two Islands’ Award-winning Mark’s House Complete in Michigan,” *designboom*, September 10, 2013, <http://www.designboom.com/architecture/two-islands-award-winning-marks-house-complete-in-michigan/>
- 6 Jenny Xie, “Is the Internet’s Appetite for Sexy Renderings Hurting Architecture?,” *CityLab*, September 24, 2013, <http://www.citylab.com/design/2013/09/internets-appetite-sexy-renderings-hurting-architecture/6734/>
- 7 Amy Frearson, “Elbphilharmonie by Herzog & de Meuron at Venice Architecture Biennale 2012”, *Dezeen*, August 30, 2012, <http://www.dezeen.com/2012/08/30/elbphilharmonie-by-herzog-de-meuron-at-venice-architecture-biennale-2012/>
- 8 Julian Bohne, “Fed up of Being Short-Changed’: the Real Reason Hamburg said no to the Olympics”, *The Guardian*, December 9, 2015, <http://www.theguardian.com/cities/2015/dec/09/2024-olympics-why-hamburg-no-hosting>
- 9 Karen Cilentio, “Renderings versus Realized”, *Archdaily*, July 31, 2010, <http://www.archdaily.com/71402/renderings-verse-realized>
- 10 Christian Zöllner, “The Elbphilharmonie Renderings,” in *Rendering*, ed. Kyle May et al. (New York: Clog, 2012), 100.
- 11 Julian Bohne, “Fed up of Being Short-Changed’: the Real Reason Hamburg said no to the Olympics”, *The Guardian*, December 9, 2015, <http://www.theguardian.com/cities/2015/dec/09/2024-olympics-why-hamburg-no-hosting>
- 12 Mark Minkjan, “What this MVRDV Rendering says About Architecture and the Media,” *Failed Architecture*, February 15, 2016, <http://www.failedarchitecture.com/what-this-mvrdv-rendering-says-about-architecture-and-media/>
- 13 Ibid.
- 14 Ibid.
- 15 Ibid.
- 16 Ibid.
- 17 Ibid.
- 18 Ibid.
- 19 Kyle May et al, editors, *Rendering* (New York: Clog, 2012), 5.

- 20 Belmont Freeman, “Digital Deception”, *Places Journal*, May 2013, <https://placesjournal.org/article/digital-deception/>
- 21 Ibid.
- 22 Ibid.

Part Five

- 1 Jordan G. Teicher, “A poetic vision of Paris’ crumbling suburban high-rises,” *The Washington Post*, accessed on May 4, 2016, <https://www.washingtonpost.com/news/in-sight/wp/2015/10/01/a-poetic-vision-of-paris-crumbling-suburban-high-rises/>
- 2 The Miscreants, “A Forgotten Future: The Surreal High-Rises of Paris,” *7Deadly*, accessed on May 4, 2016, <http://www.7deadlymag.com/lust/grand-ensembles-paris-high-rises/>
- 3 Ibid.

Conclusion

- 1 Jessica Mairs, “World’s largest co-living complex promises residents ‘everything at their fingertips,’” *Dezeen*, accessed on April 28, 2016, <http://www.dezeen.com/2016/04/28/collective-old-oak-common-co-living-plp-architecture-willesden-junction-london-housing/>

Bibliography

Aldridge, Alexandra. *The Scientific World View in Dystopia* (Ann Arbor, Michigan: UMI Research Press, 1984)

Lamar Anderson, "Do Architecture Photos Lie?" *Architizer*, accessed on February 19, 2016, <http://architizer.com/blog/do-architecture-photos-lie/>

Frances Anderton, "Space Odyssey," *Dwell*, (2006) 160-169.

Atwood, Margaret. *Moving Targets Writing With Intent, 1982-2004* (Toronto, Ontario: Anansi, 2004)

Margaret Atwood, "When Privacy is Theft," *The New York Review of Books*, accessed on March 26, 2016, <http://www.nybooks.com/articles/2013/11/21/eggers-circle-when-privacy-is-theft/>

Bairoch, Paul and Gary Goertz, "Factors of Urbanization in the Nineteenth Century Developed Countries: A Descriptive and Econometric Analysis" in *Urban Studies*, (1986) 285-305.

Baker-Smith, Dominic. *Between Dream and Nature: Essays on Utopia and Dystopia*. (Amsterdam: Rodopi, 1987)

Ballard, J. G. *High-rise* (London: J. Cape. 1975)

Robin Banerji, "Niemeyer's Brasilia: Does it Work as a City?" *BBC News*, accessed on March 16, 2016, <http://www.bbc.com/news/magazine-20632277>

Banham, Reyner. *The Visions of Ron Herron. Architectural Monographs* (New York: St. Martin's Press, 1994)

Julian Bohne, "Fed up of Being Short-Changed?: the Real Reason Hamburg said no to the Olympics", *The Guardian*, accessed March 7, 2016, <http://www.theguardian.com/cities/2015/dec/09/2024-olympics-why-hamburg-no-hosting>

Booker, M. K. *Introduction to Dystopian Literature: A Theory and Research Guide* (Westport, Conn.: Greenwood Press, 1994), 1-9.

Byvanck, Valentijn, *Superstudio, Superstudio: The Middelburg Lectures* (Middelburg: Zeeuws Museum, 2005)

Ellis Calvin, "The Natural City", *Hypocrite Reader*, accessed on March 10, 2016, <http://www.hypocritereader.com/3/the-natural-city>

Canadian Architect, "A Stable World That will Last Forever on View in Vancouver", *Canadian Architect*, accessed on March 6, 2016, <https://www.canadianarchitect.com/architecture/a-stable-world-that-will-last-forever-on-view-in-vancouver/1003506252/>

Heather Carlsen, "Two Islands' Award-winning Mark's House Complete in Michigan," *designboom*, accessed on March 6, 2016, <http://www.designboom.com/architecture/two-islands-award-winning-marks-house-complete-in-michigan/>

Sara Fernandez Cendon, "Pruitt-Igoe 40 Years Later," The American Institute of Architects, accessed on July 6, 2016, <http://www.aia.org/practicing/AIAB092656>

Karen Cilento, "Update: Elbe Philharmonic Hall/Herzog and de Meuron", Archdaily, accessed on March 7, 2016, <http://www.archdaily.com/177177/update-elbe-philharmonic-hall-herzog-and-de-meuron-2>

Karen Cilento, "Update: Construction Stopped on Elbe Philharmonic/Herzog and de Meuron", Archdaily, accessed on March 7, 2016, <http://www.archdaily.com/186370/update-construction-stopped-on-elbe-philharmonic-herzog-and-de-meuron>

Karen Cilento, "In Progress: Elbe Philharmonic Hall/Herzog and de Meuron", Archdaily, accessed on March 7, 2016, <http://www.archdaily.com/62374/in-progress-elbe-philharmonic-hall-herzog-and-de-mueron>

Karen Cilento, "Renderings versus Realized", Archdaily, accessed February 19, 2016, <http://www.archdaily.com/71402/renderings-verse-realized>

Coleman, Alice, King's College London Design Disadvantage Team. *Utopia on Trial: Vision and Reality in Planned Housing* (H. Shipman: 1985)

Crockett, S. D. "Why we Love Dystopian Stories," *We Love This Book*, accessed on February 2, 2016, <http://www.welovethisbook.com/features/why-we-love-dystopian-stories>

Crompton, Dennis, Archigram Archives, eds. *A Guide to Archigram 1961-74*, trans. Irene Aeberli, Katherine Brünagel, Philip Mann, Christian Steiner, Camilla Nielsen, Chris Charlesworth (New York: Princeton Architectural Press, 2012)

Dick, Philip K. 1982. *Blade Runner: (Do Androids Dream of Electric Sheep?)* (New York: Ballantine Books, 1982)

Edward Docx, "The Circle by Dave Eggers – review," *The Guardian*, accessed on April 1, 2016, <http://www.theguardian.com/books/2013/oct/09/circle-dave-eggars-review>

Eggers, Dave, *The Circle* (Toronto: Vintage Canada, 2014)

Elliott, Robert C, "The Fear of Utopia," *The Centennial Review* 7 (1963): 237-51.

Encyclopedia Britannica Online, s.v. "Science Fiction," accessed on April 21, 2016, <http://www.britannica.com/art/science-fiction/SF-cinema-and-TV#toc235726>

Forster, E.M., "The Machine Stops," in *Strange Universe: An Anthology of Science Fiction*, comp. Amabel Williams-Ellis, Michael Pearson (Glasgow: Blackie & Son Limited, 1974) 148-181.

Amy Frearson, "Elbphilharmonie by Herzog & de Meuron at Venice Architecture Biennale 2012", Dezeen, accessed March 7, 2016, <http://www.dezeen.com/2012/08/30/elbphilharmonie-by-herzog-de-meuron-at-venice-architecture-biennale-2012/>

Belmont Freeman, "Digital Deception", Places Journal, accessed on March 6, 2016, <https://placesjournal.org/article/digital-deception/>

Leigh Gallagher, "The End of the Suburbs," Time, accessed on July 18, 2016, <http://ideas.time.com/2013/07/31/the-end-of-the-suburbs/>

Jonathan Glancey, "Anti-matter," The Guardian, accessed on February 29, 2016, <http://www.theguardian.com/artanddesign/2003/mar/31/architecture.artsfeatures>

Leonardo R. Grabkowski, "Negative Effects of Urban Sprawl," San Francisco Gate, accessed on July 18, 2016, <http://homeguides.sfgate.com/negative-effects-urban-sprawl-1716.html>

Hillegas, Mark R. *The Future as Nightmare: H. G. Wells and the anti-Utopians* (Carbondale, Illinois: Southern Illinois University Press, 1974)

Howard, Ebenezer. *Garden Cities of Tomorrow* (London: Faber and Faber Ltd, [1902] 1945)

Howey, Hugh. *Wool* (New York: Simon & Schuster, 2013) Print edition.

Jacobs, Jane. *The Death and Life of Great American Cities* (New York: Vintage Books, 1992)

Jencks, Charles, *The Language of Post-Modern Architecture* (London: Academy Editions, 1977)

Anna Kats, Dion Tan, "What Might Have Been: Frank Lloyd Wright's Strange Urban Vision at MoMA", Blouin Art Info, accessed on March 20, 2016, <http://www.blouinartinfo.com/news/story/1006695/what-might-have-been-frank-lloyd-wrights-strange-urban-vision>

Kim, Jeoung-eun, Hyouk-joon Kim, *Dance with Archigram* (Seoul: APACE, 2005)

Ray Kurzweil, "The Law of Accelerating Returns," Kurzweil Accelerating Intelligence, accessed on march 19, 2016, <http://www.kurzweilai.net/the-law-of-accelerating-returns>

Lang, Peter, *Superstudio: Life Without Objects*, eds. William Menking, *Superstudio* (Milano, Italy: Skira, 2003)

Fernando Lara, Stella Nair, "The Brazilianization of Brasilia", *The Journal of the International Institute*, accessed on March 16, 2016, <http://quod.lib.umich.edu/j/jii/4750978.0014.214/--brazilianization-of-brasilia?rgn=main;view=fulltext>

Le Corbusier. *The Radiant City : Elements of a Doctrine of Urbanism to be Used as the Basis of our Machine-age Civilization.* (New York: Orion Press, 1967)

Library of Congress, s.v. "Progressive Era to New Era 1900-1929," accessed on April 25, 2016, <http://www.loc.gov/teachers/classroommaterials/presentationsandactivities/presentations/timeline/progress/cities/>

Library of Congress, s.v. "Rise of Industrial America 1876-1900," accessed on April 25, 2016, <http://www.loc.gov/teachers/classroommaterials/presentationsandactivities/presentations/timeline/riseind/city/>

Susannah Luthi, "Brainwash, Condition, Repeat: Dave Eggers' 'The Circle,'" Los Angeles Review of Books, accessed on March 31, 2016, <http://lareviewofbooks.org/article/dave-eggers-the-circle>

Jessica Mairs, "World's largest co-living complex promises residents 'everything at their fingertips,'" Dezeen, accessed on April 28, 2016, <http://www.dezeen.com/2016/04/28/collective-old-oak-common-co-living-plp-architecture-willesden-junction-london-housing/>

May, Kyle, Julia van den Hout, Jacob Reidel, Human Wu, Jeffrey Franklin, and Archie Lee Coates, editors, *Rendering* (New York: Clog, 2012)

Morgan Meis, "Frank Lloyd Wright Tried to Solve the City", *The New Yorker*, accessed on March 18, 2016, <http://www.newyorker.com/culture/culture-desk/frank-lloyd-wright-tried-to-solve-the-city>

Mill, John Stuart, "Speech on Mr. Maguire's Motion on the State of Ireland" in *The Irish Land Question* (London: Longmans, Green, Reader, and Dyer, 1870): 108.

Mark Minkjan, "What this MVRDV Rendering says About Architecture and the Media," *Failed Architecture* (blog), accessed on February 16, 2016, <http://www.failedarchitecture.com/what-this-mvrdv-rendering-says-about-architecture-and-media/>

Gili Merin, "AD Classics: Ville Radieuse/Le Corbusier", *Archdaily*, accessed on March 16, 2016, <http://www.archdaily.com/411878/ad-classics-ville-radieuse-le-corbusier>

The Miscreants, "A Forgotten Future: The Surreal High-Rises of Paris," *7Deadly*, accessed on May 4, 2016, <http://www.7deadlymag.com/lust/grand-ensembles-paris-high-rises/>

Rowan Moore, "Pruitt-Igoe: death of the American urban dream," *The Guardian*, accessed on July 6, 2016, <https://www.theguardian.com/artanddesign/2012/feb/26/pruitt-igoe-myth-film-review>

Moylan, Tom, and Raffaella Baccolini. *Dark Horizons: Science Fiction and the Dystopian Imagination*. (New York: Routledge, 2003)

Moylan, Tom. *Scraps of the Untainted Sky: Science Fiction, Utopia, Dystopia*. (Boulder, Colo.: Westview Press, 2000)

Negley, Glenn Robert, and John Max Patrick. *The Quest for Utopia: An Anthology of Imaginary Societies*. (Garden City, N.Y.: Doubleday, 1962)

New World Encyclopedia, s.v. "Dystopia," accessed on February 9, 2016, <http://www.newworldencyclopedia.org/entry/Dystopia>

Newman, Oscar, *Creating Defensible Space* (Darby, Pennsylvania: Diane Publishing Company, 1996)

Matt Novak, "Broadacre City: Frank Lloyd Wright's Unbuilt Suburban Utopia", accessed on March 15, 2016, <http://paleofuture.gizmodo.com/broadacre-city-frank-lloyd-wrights-unbuilt-suburban-ut-1509433082>

Oxford English Dictionary, s.v. "utopia," accessed on February 9, 2016, <http://www.oed.com/view/Entry/220784?redirectedFrom=utopia#eid>

Oxford English Dictionary, s.v. "dystopia," accessed on February 9, 2016, <http://www.oed.com/view/Entry/58909?redirectedFrom=dystopia#eid>

Oxford English Dictionary, s.v. "white flight," accessed on July 18, 2016, <http://www.oed.com/view/Entry/228566?redirectedFrom=white+flight#eid14365982>

Adelyn Perez, "AD Classics: Centre Georges Pompidou/Richard Rogers + Renzo Piano," Archdaily, accessed on July 11, 2016, <http://www.archdaily.com/64028/ad-classics-centre-georges-pompidou-renzo-piano-richard-rogers>

Alan Riding, "Brasilia: A City of the Future Grapples with a Troubled Present," New York Times, accessed on March 16, 2016, <http://www.nytimes.com/1988/01/03/arts/brasilia-a-city-of-the-future-grapples-with-a-troubled-present.html>

Sadler, Simon. Archigram: Architecture without Architecture (Cambridge, Mass.: MIT Press, 2005)

Soule, David C. Urban Sprawl: A Comprehensive Reference Guide. (Westport, Connecticut: Greenwood Publishing Group, 2006)

Jordan G. Teicher, "A poetic vision of Paris' crumbling suburban high-rises," The Washington Post, accessed on May 4, 2016, <https://www.washingtonpost.com/news/in-sight/wp/2015/10/01/a-poetic-vision-of-paris-crumbling-suburban-high-rises/>

Henrietta Thompson and Jonathon Bell, "The Pompidou Centre," The Guardian, accessed on July 11, 2016, <https://www.theguardian.com/artanddesign/2007/oct/09/architecture2>

Scott Timber, "It's time to reread Dave Eggers' 'The Circle': Why his under-appreciated Silicon Valley workplace novel resonates now more than ever," Salon, accessed on March 26, 2016, http://www.salon.com/2015/08/19/its_time_to_reread_dave_eggers_the_circle_why_his_under_appreciated_silicon_valley_workplace_novel_resonates_now_more_than_ever/

Ellen Ulman, "Ring of Power: 'The Circle,' by Dave Eggers," New York Times, accessed on March 26, 2016, http://www.nytimes.com/2013/11/03/books/review/the-circle-by-dave-eggers.html?_r=1

The USA Online, s.v. "Urbanization of America," accessed on April 25, 2016, <http://www.theusaonline.com/people/urbanization.htm>

United Nations Educational, Scientific, and Cultural Organization (UNESCO), "Brasilia," UNESCO, accessed on March 16, 2016, <http://whc.unesco.org/en/list/445>

Walsh, Chad. From Utopia to Nightmare. (London: Geoffrey Bles, 1962)

Ward, Stephen, *The Garden City: Past, Present and Future* (New York: Routledge, 1992)

Work Architecture Company. *49 Cities*. (New York: Storefront for Art and Architecture, 2010)

Woods, Lebbeus. *Radical Reconstruction* (New York: Princeton Architectural Press, 1997)

Woods, Lebbeus. *Anarchitecture : Architecture is a Political Act* (London: Academy Editions, 1992)

Woods, Lebbeus. "An Essay for Thom Mayne." Essay written for the Pritzker Architecture Prize, 2005.

Lebbeus Woods, "UNDERGROUND BERLIN: The Film Treatment", Lebbeus Woods, accessed on February 29, 2016, <https://lebbeuswoods.wordpress.com/2009/09/15/underground-berlin-the-film-treatment/>

Jenny Xie, "Is the Internet's Appetite for Sexy Renderings Hurting Architecture?", CityLab, accessed February 19, 2016, <http://www.citylab.com/design/2013/09/internets-appetite-sexy-renderings-hurting-architecture/6734/>

Zamyatin, Yevgeny, *We*, Trans. Natasha Randall (New York: Modern Library, [1924] 2006)

Film:

The Pruitt-Igoe Myth: An Urban History, directed by Chad Friedrichs (2011; New York: First Run Features, 2012) DVD.

Appendix A

The Doomsday Clock

The Doomsday Clock was created by the Bulletin of Atomic Scientists in 1947 as a symbolic measure of nuclear threats facing mankind. The closer the clock is to midnight, the greater the possibility of a global catastrophe. The clock's initial position was set at seven minutes to midnight and, since its inception, the clock's hands have been adjusted twenty-one times with the closest setting at two minutes to midnight in 1953 during the height of the Cold War when the United States and the Soviet Union were developing and testing hydrogen bombs. In 2007, the decision was made to factor climate change into the doomsday clock assessments as one of the greatest threats to civilization. Due to "unchecked climate change, global nuclear weapons modernizations, and outsized nuclear weapons arsenals"¹ the doomsday clock has remained set at three minutes to midnight since 2012. The title of this thesis, 'Three Minutes to Midnight,' is an allusion to the current setting of the Doomsday Clock that is meant to draw on the general understanding of the clock as a symbol of the threat that humanity poses to itself.

¹ The Bulletin of Atomic Scientists, "It is 3 Minutes to Midnight," The Bulletin of Atomic Scientists, accessed on February 8, 2016, <http://thebulletin.org/clock/2015>



Figure 6.1-*The current setting of the Doomsday Clock announced on January 26, 2016 by the Bulletin of Atomic Scientists.*