

“As the World Fell, Each of Us in Our Own Way was Broken”

Infrastructure in Post-Apocalyptic Cinema.

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Title

“As the World Fell, Each of Us in Our Own Way was Broken”: Infrastructure in Post-Apocalyptic Cinema.

Abstract

This thesis applies infrastructural theory to recent science fiction cinema that explores the post-apocalyptic subgenre. *Mad Max: Fury Road* (George Miller, 2015), *Snowpiercer* (Bong Joon-ho, 2013), and *Dredd* (Pete Travis, 2012) each provide a unique set of apocalyptic circumstances leading to the creation of their new world and the subsequent infrastructures that fill them. By applying infrastructural theories such as the flows of society from Brian Larkin (2013) and the infrastructural inversion from various sources such as Nicole Starosielski (2015), it is seen how these cinematic worlds function and operate. This approach is undertaken by examining the types of infrastructures that are created and maintained within these new worlds and how through their interactions, they enable the flows of goods, people and ideas to circulate within a society. My thesis expands on this infrastructural understanding further by examining how infrastructure, once understood within the context of their cinematic narrative, can create and reinforce social relations and a new ruling-class. This thesis' perspective will also show the prevalence of dystopias within each narrative world, which, as a result of the infrastructurally created power-relations, enable these films to be reflective of modern circumstances to be critical of their socio-political trends by showing a possible outcome.

Statement of Originality

This thesis is presented in partial fulfillment of the requirements of the degree of Master of Research at Macquarie University.

This work has not previously been submitted for a degree or diploma in any university. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference is made in the thesis itself.

(Signed) _____ Date: 24/02/2022

Introduction

Infrastructure Between Science Fiction and Disaster

“As the world fell, each of us in our own way was broken”

Max Rockatansky – *Mad Max: Fury Road* (George Miller, 2015)

“No one really knows what would happen if things go wrong”

Will Sawyer – *Skyscraper* (Rawson Thurber, 2018)

From Disaster Movies to Science Fiction Cinema

Disaster movies have a habit of destroying as much infrastructure as possible within their run-time, and Dean Devlin’s 2017 film *Geostorm* continues this tradition. The film follows Jake Lawson (Gerard Butler) as he returns to the international space station to fix the satellite network called “Dutch Boy”, meanwhile his brother, Max (Jim Sturgess), acts as his on-the-ground handler back on Earth. Dutch Boy is a global network of satellites that manipulates the Earth’s environment to deter natural disasters caused by global warming. Prior to the creation of Dutch Boy these disastrous events included tsunamis in Manhattan and lethal heatwaves in Madrid. These events required an extreme form of innovation as the world banded together into a new political collective, using scientists from seventeen nations to create Dutch Boy to protect the interests of the planet for all human life. However, unlike its intended global defensive initiative, in true Hollywood fashion, Dutch Boy is weaponised for the political gains of Leonard Dekkom (Ed Harris) who wants to remove the United States of America’s enemies and become president. As Dutch Boy’s destructive capabilities are utilised, we see the networked nature of modern infrastructure and how they are made visible by their breakdown, such as the heatwave that hits Hong Kong. In this scene the temperature over the city rapidly increases to a dangerous level which causes massive infrastructural damage. The sequence begins with Max’s friend driving along a rapidly heating road, attempting to escape the danger zone. Below the road’s surface lay the gas pipelines that transverse the city. As these become super-heated, the pipes reduce the structural integrity of the road itself, causing it to crack and allowing the heat to escape in a venting effect. This is quickly followed by the complete collapse of the roads. As the ground gives way, the buildings on top (apartments, business blocks, shopping areas) begin to collapse, often resulting in contact with other buildings, creating a domino effect as the heatwave spreads across the city. Another scene demonstrating comparable infrastructural breakdown is later in the film when an apocalyptic thunderstorm hits Florida. During the strikes, multiple pieces of infrastructure are hit, including a stadium and bridges, as well as construction sites. As these infrastructures are struck by lightning and subsequently destroyed, their role within the infrastructural network becomes evident as bridge destruction reroutes the escaping population, while the stadium, full of panicked guests due to the political convention taking place, fails to

completely evacuate on time, and the previous social hub traps the remaining guests as the structure fails to withstand the continual lightning strikes. These events demonstrate not only the destructive capabilities of Dutch Boy, but also the networked nature of the modern world. This is seen through the emergent effects of infrastructure; the continued rise of consequences to the breakdown of infrastructures such as damaged roads and bridges disrupting traffic, or a broken sewer polluting the ground and population surrounding it.

Through this example we see infrastructure become a central element of the narrative, but only when it is destroyed. This is true of the disaster genre more broadly whether it be the burning skyscraper in the aptly named 2018 film *Skyscraper* (Rawson Thurber), an entire oil rig in 2016's *Deepwater Horizon* (Peter Berg), or the Hoover Dam, Golden Gate Bridge and San Francisco in general in 2015's *San Andreas* (Brad Peyton). Nothing is safe or sacred when it comes to disaster cinema. However, while both disaster and SF (science fiction) movies have infrastructure as a central figure to the worlds, my focus is on the latter as the genre explores the role of infrastructure in shaping daily life. This is because SF cinema allows us to see our social reality from a different perspective. While I am not suggesting a direct correlation between these films and reality, I am suggesting a speculative connection which asks audiences to think differently about the real world as it is and as it could be. These speculative worlds that SF films portray contain recognisable infrastructures (as I explore in the following sections and chapters) and narratives grounded in experiences drawn from the real world (such as environmental issues and resource shortages) that offer a point of departure from the social reality to a speculative future.

In infrastructural theory it is argued that through the breakdown of infrastructure, the previously considered “invisible” elements become visible, and this new space creates opportunities to innovate the systems, whilst also revealing the plans of the operators within the infrastructure (Harvey, Jenson & Morita, 2017 & Starosielski, 2015). An example of this revealing of operator's agendas can be seen in *Total Recall* (Verhoeven, 1990) when the breakdown of air flow within the Mars habitat was revealed to be a plan by the operator to dominate and control the mutant population. This process has also been referred to as the infrastructural inversion by theorists such as Nicole Starosielski (2015), who explores this inversion by analysing infrastructure regarding the social, economic and political agendas that go into their creation and maintenance. An example of infrastructural inversion used to analyse modern society is provided by Christina Schwenkel in a 2015 article on Socialist Vietnam. In her analysis of breakdown in Vietnam, she states that breakdowns can also expose and reinforce social hierarchies while generating possibilities for “new social and political collectivities to emerge around the deployment, upkeep, and breakdown of technical systems” (2015: 522 & 528). This means that in social environments where essential

infrastructures are not properly maintained, a new collective may form around the situation and claim control over the breaking down infrastructure. This effect is seen in *Geostorm* for instance, by the global collective that appeared in the wake of the pre-Dutch Boy events, as a global political collective was formed to address the destruction.

Within the modern world, while infrastructures are largely invisible until their breakdown, they have also been imagined as agents of utopia through creating a world in movement where “by promoting circulation, infrastructures bring about change, and through change they enact progress, and through progress we gain freedom” (Larkin, 2013: 332). But in SF contexts infrastructure can generate dystopian worlds where a new class of autocratic and totalitarian rulers dominate all elements of society to utilise them for their own agendas. This is especially evident within SF post-apocalyptic cinema where the new world is being rebuilt from the ruins of the old one, as previous power-relations are decimated and their societies collapse, such as in *Mad Max 2* (George Miller, 1981), *Oblivion* (Joseph Kosinski, 2013) and *Equilibrium* (Kurt Wimmer, 2002). In these new worlds, characters have to engage with the infrastructure around them to the point where in order to fully understand a film, its world and its characters, an understanding of the infrastructures that create them is needed. It is here that this thesis fits within the field of SF cinema studies as I argue that infrastructure in post-apocalyptic worlds allow the new generation of ruling classes to continue to dominate society through utilising the effects of infrastructure to create and enforce power relations within these new worlds. This thesis combines infrastructural theory with film analysis to understand how the infrastructures in post-apocalyptic cinema are central to the socio-political control of the rulers in these new societies.

For this thesis, I define power as the ability of someone to influence another’s behaviour and dictate terms for how they should operate within a context. My understanding of “power” comes from Michel Foucault and Paul Tillich who both explore the theoretical understanding of the concept. Foucault argues that “power relations have an immediate hold upon [the body]” whereby power “is largely as a force of production that the body is invested with relations of power and domination” (1979: 31-32). Tillich argues that bearers of power and the ever-changing balance of power are the result of its interaction and relation to someone else with or without power (1954: 41). What these theories tell us about power relations is that power does not exist in a vacuum, but rather is the result of the society built around it. These theories also tell us that power has a direct relationship with the body, whereby it can control and shape others in a manner that the bearers of power see fit. I add to this sentiment by arguing that those with power can only maintain it through domination of the infrastructure that structures the world around us. The power to subjugate others is provided by these infrastructures as they dictate how users interact with the society around them, such as obtaining resources, access to facilities such as schooling and healthcare, as well as

separating public and private spaces. Therefore all users of infrastructure must adhere to these power relations set out by those with the power over the infrastructure in order to utilise them.

Foucault further argues that power relations create “docile bodies”, willing subjects whose body “may be subjected, used, transformed and improved” (1979: 142). I build upon this by arguing that these “docile bodies” are needed to operate in and around infrastructure in order for them to operate appropriately, to allow rulers to maintain their power and submit others to their rule and subjugate notions of the possibility of leadership changes.

SF and the Creation of New Worlds

Within the new worlds they portray, SF films are able to “visualiz[e] the unimaginable” (Schmidt, 2014) through the use of novum. The novum is the creation of something that is “unexpectedly new, which pushes humanity out of its present towards the not yet realized” (Moylan, 1982: 159), and can be a person, place, or thing. It is an element of the story that is created for the narrative to set up a world that has been “pushed” beyond the limits of today and into the future. In his chapter on building SF worlds Paolo Bertetti argues that “we can create a possible world starting from our “real” world (the so-called Actual World, in opposition to Possible Worlds) by altering (i.e. activation or narcotization) even a single property” (2017: 48-49). In this argument, “property” refers to individual characteristics bundled together, such as physical qualities, and relations and actions performed. For example, altering the physical characteristic “properties” of a character can change them from a human into an alien. This definition from a worldbuilding perspective pairs with the SF novum as a way to push the narrative beyond the “real” world into a “possible” world.¹

Dutch Boy from *Geostorm* is an example of a novum as it is non-existent “thing” in the modern world that establishes the futuristic setting of the film. Other examples include Dr Brown’s time-travelling DeLorean from the *Back to the Future* film series, while in *Independence Day* we see the novum as a person in the form of the alien species, as well as a thing in the form of their weaponry and spacecraft. In post-apocalyptic films, the entire landscape becomes the novum as images of destroyed cities establish their narratives as set in a time beyond the modern world. Such examples include the wastelands shown in John Hillcoat’s 2009 film *The Road*, showing a world devoid of workable infrastructure, and in Francis Lawrence’s 2007 interpretation of *I Am Legend*, where New York is devoid of most human life as nature reclaims the city.

The use of novum in SF narratives creates what Darko Suvin calls “cognitive estrangement” (1979: 13). Perry Nodelman interprets this concept to mean the “factual reporting of fictions” whereby unfamiliar situations are described as if they are familiar (1981, 24). This has the effect of

¹ For more on worldbuilding see the book in which Bertetti’s chapter is included (Boni, 2017) as well as writing guidebooks (Card, 2001).

separating the audience from their assumptions about reality and allows them to engage with the new worlds they are witnessing. Cognitive estrangement can be described as a type of defamiliarisation effect where common things are represented in new unfamiliar ways which allows a new perspective to view the world. For example, the use of the Statue of Liberty in *Planet of the Apes* (Franklin Schaffner, 1968) takes the familiar icon and places it in a defamiliarised way (washed up on a beach) to create the new perspective of the same Earth in a different time. Within worldbuilding, Bertetti argues that SF always takes the form of anticipation formulated from existing tendencies (2017: 50), meaning SF worlds are built on the fears and thoughts of what our future will look like. Bertetti argues this creates worlds where, unlike their fantasy counterparts, they are physically possible worlds (nothing supernatural or breaks physical laws) leading him to conclude that SF worlds “belong to naturally possible worlds” (2017: 51). The ability for SF to exist in “possible” worlds helps establish the cognitive estrangement by making them “possible” within a real-world context.

A commonly used cinematic technique I have identified is the “factual reporting of fictions” through the use of diegetic newscasts, where they literally report the fictitious world as if it was “fact”. Most commonly used in the establishment of the circumstances that have created the new SF world, they demonstrate the required background context to connect the current world to the film’s new one. Zombie movies, which can be included in the post-apocalyptic genre, use this technique to great effect to show the collapse of modern society such as in the 2004 version of *Dawn of the Dead* (Zach Snyder) and in the satirical zombie parody *Shaun of the Dead* (Edgar Wright, 2004). This allows SF, through effects like cognitive estrangement, to be simultaneously reflective of and critical of reality by “factually” reporting the circumstances of the new worlds. This sentiment is supported by Aiden Power who states SF “exists in the interstices between utopia and dystopia [and] has long asked questions of society by creating worlds that closely mirror those they purport to represent” (2018: 12). This means that SF utilises utopian and dystopian tendencies in the creation of their new worlds to comment on the “mirrored” world of today.²

The ability of SF cinema to be critical of reality links directly with utopian and dystopian theory, which Suvin argues combine to create the “socio-political subgenre of science fiction” (1979: 61) or as Andrew Milner calls it “social-science-fiction” (2012: 90).³ The vast majority of post-apocalyptic films can be described as dystopian from *Soylent Green* (Richard Fleischer, 1973) to *The Matrix* (The Wachowskis, 1999) to the recent *Planet of the Apes* prequel trilogy (Rupert Wyatt, 2011; Reeves, 2014 & 2017). The term “dystopia” translates to “bad place” with its coinage being variously attributed to Henry Younger (1747), Noel Turner (1782) and John Mill (1868) (Milner, 2012;89-90), long after Thomas More’s introduction of the term “utopia” in his 1516 book.⁴ The use of the term dystopia has been argued to come under two types of analysis: the “critical dystopia” and “uncritical

dystopia.”⁵ Critical dystopia, as Milner interprets it following Tom Moylan, is a genre that “bring[s] utopian and dystopian tendencies to bear on their exposé of the present moment” (Milner, 2012: 119), or as Fredric Jameson calls it the “negative cousin of Utopia” (2005: 198).⁶ In Jameson’s argument, the other side (uncritical) of the field has the conviction that human nature is so corrupt that it cannot be salvaged by a “heightened consciousness of the impending dangers” (Jameson, 2005:198). Collectively, these scholars argue that it is only the “critical dystopia” side of the field that acts as a warning to society following Robert Heinlein’s “if this goes on” principle (Heinlein, 1940). This principle is based on the logic that if current trends continue then the new world shown is a possible result and is used as a warning against current trends. A similar argument is provided by Lyman Sargent who argues “the eutopia says if you behave thus and so, you will be rewarded with this. The dystopia, in the tradition of the jeremiad, says if you behave thus and so, this is how you will be punished” and follows up saying “both...are suggesting that alternative modes of behaviour are possible” (1994: 8) and therefore opposes the uncritical dystopian perspective of believing human nature cannot be salvaged.

Understanding these two distinct styles is useful when analysing different types of SF cinema as they provide a lens to view the power-relations within the narratives. Adopting this perspective when assessing the role of infrastructure within these narratives allows us to see how such infrastructure plays a major role in determining the style of dystopia. The type of dystopia becomes especially evident in the endings of these films as the infrastructures become central to whether the film fits the criteria for a critical or uncritical dystopia.⁷

² While the opening newscast is one possible example to establish the new world, Bertetti lists three styles for establishing the SF world: the world is similar to the real world before everything is changed by an event; from the beginning, the SF world is distinctly different but hidden to the viewer as a “strategy of gradual revelation of novum”; the SF world is distinctly different from the beginning and is made immediately known due to information unrelated to the real world such as the texts crawls (2017: 55-56)

³ This is the case in the American argument which argues that utopia and dystopia are subgenres of SF. In comparison, the European school of thought argues that “utopia and SF are distinct, but nonetheless cognate, genres” (Milner, 2012: 90,96). This means that the European school thinks they are separate genres that are related, compared to the American school that believes they are more than related and instead is a subcategory of the overarching SF genre.

⁴ The term “utopia”, while being associated with an ideal society, translates to “no place”. It is actually “eutopia” that translates to “good place”.

⁵ Fredric Jameson (2005: 198) worked on the binary of “anti-utopia” (uncritical) and “critical dystopia” while others like Milner and Moylan use a more definitive categorisation system. These include the introduction of ‘classic-dystopia’ alongside ‘critical-dystopia’ as socially critical sub-genres, and ‘pseudo-dystopia’, ‘anti-critical dystopia’ alongside ‘anti-utopia’ as not socially critical (Milner, 2012: 195; Moylan, 2000:195).

⁶ The term was original coined by Lyman Sargent (1994) before being expanded upon by Moylan (2000).

⁷ See Albaina, 2009; Blaim & Gruszevska-Blaim, 2011; Klonowska, 2018; Milner, 2004; for more on SF cinema and dystopias.

While many SF narratives provide unique examples of futuristic, often dystopian worlds, within the genre, post-apocalyptic narratives provide further unique examples due to their nature as being set after the “end” of the world. These events could be the result of a global pandemic as in the case of *I Am Legend* (Lawrence, 2007) and *12 Monkeys* (Terry Gilliam, 1995), or environmental disasters such as *Waterworld* (Kevin Reynolds, 1995) and *Wall-E* (Andrew Stanton, 2008). Other circumstances include an alien invasion such as *Oblivion* (Joseph Kosinski, 2013) and *Independence Day* (Roland Emmerich, 1996), a zombie apocalypse like in *Zombieland* (Ruben Fleischer, 2009) and *World War Z* (Marc Forster, 2013), or the fallout from a third world war such as *Equilibrium* (Kurt Wimmer, 2002) and *The Book of Eli* (The Hughes Brothers, 2010). However, as Maria Lisboa argues, “almost without exception, from the Ancient Greeks and the Bible to contemporary science fiction, in the aftermath of Armageddon, following near-global destruction, there is usually enough left over to permit a new beginning” (2011: 8). This is where post-apocalyptic worlds begin, as society is rebuilt, but Lisboa argues this will not result in the creation of new utopian societies but rather there will be “enough left of the old mindset to justify the fear that, once survival is consolidated, the factors which led to near-miss destruction in the first place will also be reinstated” (2011: 8). This “old world mindset” becomes central to the power-relations in post-apocalyptic narratives where the newly rebuilt infrastructures are ruled in ways that are comparable to those in place at the end of the previous world. The reason for this form of imagining is similar to the cognitive estrangement effect of creating “factual fictions” when imagining the unimaginable, as Lisboa argues “faced with the unimaginable, where we are able to articulate in its aftermath will almost certainly be just another version of what we already knew” (2011: 100). This results in the creation of futuristic societies that are based on logic from modern societies. Such an example of this logic is in the infrastructure of the SF world being comparable to modern examples and how they help establish power-relations within their respective societies. These new cinematic worlds provide a unique space for the analysis of infrastructure in determining how they play a central role in the creation and domination of power-relations in a society.

Infrastructure for the Future

Infrastructure can be defined as the material assemblage that generates and structures social relations through planned and emergent activities (Harvey, Jenson & Morita, 2017: 5). Brian Larkin argues that infrastructures “comprise the architecture for circulation, literally providing the undergirding of modern societies” because “infrastructures are matter that enable the movement of other matter” (2013: 328, 329). This “matter” facilitates the flows of goods, people and ideas as the basis for generating “the ambient environment of everyday life” (Larkin, 2013: 328). Within a

modern networked city these three flows encompass all material and social interactions of everyday life. The flow of ideas revolves around religion and education as a means of determining how the population acts. The flow of people is dictated by how populations can freely move within the network and how they can interact with its infrastructures such as through transportation. The flow of goods determines the availability of resources and how they are transported, such as through shopping centres and truck deliveries.

Within this thesis, “infrastructures” will be defined as the same as the Australian government defines it in the 2015 Critical Infrastructure Resilience Strategy Plan. This Plan argues that infrastructure is “those physical facilities, supply chains, information technologies and communication networks which, if destroyed, degraded or rendered unavailable for an extended period, would significantly impact the social or economic wellbeing of the nation or affect Australia’s ability to conduct national defence and ensure national security” (Commonwealth of Australia, 2015: 1). From this definition, we see two types of infrastructures emerge: soft infrastructures, which are based on human capital to deliver services to the population such as healthcare systems, financial institutions, and government and education systems; and hard infrastructures, which are physical systems that are needed to run a nation such as roads, ports, bridges and telecommunication (Portugal-Perez & Wilson, 2012: 1295). For consistency purposes, when examining infrastructure within the cinematic examples, the term “infrastructure” will refer to both soft and hard infrastructures as well as their interactions within a societal context. The reason for this clarification is that the purpose of this infrastructural study is to examine their interactions within power-relation discourse and how control of Larkin’s three flows is granted to whomever can dominate soft and hard infrastructures simultaneously, as opposed to focusing on single infrastructures, isolated from their wider networks.

Through the domination of these three flows via their infrastructures, a being (dictator, government, corporation) can dictate terms for which the society must follow in order to function. While domination from those with power over those without has been ever-present, the method of domination has changed throughout history, as infrastructural needs adapt to new societies. In the past, it was governments who were central to building, managing, and regulating infrastructures to produce “public goods in the public interest”, where experts were assigned to privileged positions to operate on behalf of the public (Collier, Mizes & Schnitzler, 2016). However, in more recent times, the privatisation of infrastructure has become more dominant as public utility and infrastructure projects are auctioned off or leased out in the private market (Collier, Mizes & Schnitzler, 2016). In these privatised infrastructural networks, flows of society are dictated by movements around private property, the use of the police force as a type of militia to protect property, as well as the implementation and enforcement of social structures to maintain the socially constructed

hierarchies.

Historically, single entity structures like highly visual military architecture, allowed the Lords and Kings to dictate the three flows,⁸ as multiple critical infrastructures are combined into a single structure, but in a modern networked society that has expanded beyond the confines of a single structure, social and economic hierarchies allow the ruling class the same level of control. SF infrastructure exists largely as a combination of these two forms as they combine multiple critical infrastructures into single structures while utilising some level of network to enforce social hierarchies. For example, in *Geostorm*, the International Space Station acts as the hub for the Dutch Boy satellite network that controls the environment over the planet. Internally the space station has facilities to manufacture, repair and distribute the satellites across the entire network. Space shuttles are constantly moving between the station and Earth to resupply the occupants and materials needed for their operation. This is evidence of the vast network required to sustain this infrastructure and the combination of multiple forms of critical infrastructure into a single structure in the form of the space station. Due to the space station's control of the network that maintains Dutch Boy, whoever dominates the structure can dictate terms to the society utilising it. This fight for domination becomes central to the conflict in the film as Dekkom hijacks the system and disguises political attacks as malfunctions. From the breakdown investigation, Dekkom's agenda is

revealed as he targeted those he perceived to be the United States enemies while trying to keep control of the station from being passed to an international body instead of being under the United States' control. The way infrastructure is built is vastly different within post-apocalyptic narratives compared to more traditional SF due to the nature of the worldbuilding. The main difference is that in more traditional SF, the world is built upon the infrastructure of the modern world, while post-apocalyptic worlds begin from the ground up due to the apocalyptic event destroying a vast majority of the old-world's infrastructure such as in *Reign of Fire* (Rob Bowman, 2002) where the population exists within a refortified refinery, or completely destroyed as is the wastelands of *The Road* (John Hillcoat, 2009). This returns systems to their origins where "infrastructures typically begin as a series of small, independent technologies.... they become infrastructures when either one technological system comes to dominate over others or when independent systems converge into a network" (Larkin, 2013: 330). These technological systems originate in a single location and grow in response to that location's unique ecological, political and industrial circumstances. This circumstantial growth is common amongst all infrastructural systems and not just networks. David Crowther (2017) and

⁸ Friedrich Kittler claims that only after the first industrial revolution was there enough growth to spread beyond this form of architecture paving the way for the technologically inclined megalopolis. (1996: 717)

Vera Akristiniy and Yulia Boriskina (2018) both argue this in their respective studies of medieval castles and emerging skyscrapers. In the modern world, as these technological systems advance into networks, Larkin argues “it must move to other places with differing conditions, technological standards, and legal regulations, elaborating techniques of adaptation and translation” (2013: 330). However, within a post-apocalyptic context, this is often impossible due to the no available land or societies to move to. This creates stagnated societies that can only grow within the circumstances of their own creation which often results in a reinstated mindset prevalent in the world prior to the apocalypse as Lisboa argues (2011: 8).

Thesis Overview

By applying infrastructural theories to post-apocalyptic societies depicted in recent SF cinema, this thesis analyses how the infrastructure of these new worlds allows their new rulers to dominate society in a manner that is comparable to modern society. Through this analysis, I will show how these infrastructures are also key to the establishment of the dystopias prevalent in each world. These dystopias allow the texts to be reflective of modern circumstances to criticize their trends by showing the possible outcomes of contemporary trends. Following this introduction of key theories prevalent within the relevant fields are three source analysis chapters that examine recent post-apocalyptic films: *Mad Max: Fury Road* (George Miller: 2015), *Snowpiercer* (Bong Joon-Ho: 2013) and *Dredd* (Pete Travis: 2012). These films were chosen as they are all from the last decade and each shows a different aspect and perspective on infrastructure in their respective worlds. These films also have themes relevant to the modern world, focusing on ideas of environmental decay, overpopulation and unequal class systems.

Chapter 1 on *Fury Road* uses Brian Larkin’s ideas of the three flows combined with McKenzie Wark’s (2015) reading of the film concerning the “four fluids”: blood, fuel, water and milk. Through this analysis, it is seen how each of the flows and fluids are key to controlling of the film’s wastelands, and how the structure of the Citadel becomes their central hub. Through the establishment of the Citadel as the hub of the various flows, the structure becomes the centre of the film’s world whereby whoever controls it can dictate terms to the reliant society. Through an analysis of the conflict between ideological systems, it will be shown how the dystopian world of *Fury Road* offers a perspective on modern society that change within systems is possible to bring about utopian ideals.

Chapter 2 on *Snowpiercer* focuses on infrastructural breakdowns and the ideology that becomes visible within the infrastructures. The chapter begins by establishing the post-apocalyptic world and how the train that is central to the narrative acts as a closed ecosystem for the remnants of humanity. By revealing the breakdown within the infrastructure, the political agenda of the train’s

ruler becomes evident through the ways he aims to deceive the population through hiding the innovations that aimed to fix the train. Through this analysis, it will be shown how *Snowpiercer*, like *Fury Road*, offers a utopian future to the film's current dystopia through the idea of a "restart" by removing the old-world mentality prevalent within the train. While less utopian than the example of *Fury Road* that believes change is possible within the current systems, *Snowpiercer* still does provide the opinion that change is possible, albeit through extreme measures.

The final chapter on *Dredd* focuses on the political systems that arise from within different forms of post-apocalyptic infrastructures, specifically how a failing totalitarian state tries to impose its authority on independent states of dissent that arise from within. This analysis examines how the world of *Dredd* demonstrates two styles of infrastructure prevalent in the modern world: a horizontal networked city and a vertical skyscraper city. After the establishment of these styles, it will be argued how each represents a different way to govern their respective populations as well as the prevalent agendas of each system's ruler. The conclusion of this chapter shows how the film blurs the traditional roles of hero and villain as the perceived "hero" of the film disrupts attempts to enact progress within the city in favour of fighting to maintain a failing totalitarian state. This demonstrates a counterargument to the dystopias of the previous chapter who believe change is possible, instead *Dredd* demonstrates a different viewpoint on society by showing one that is not salvageable from the human agendas already established within the systems.

In the conclusion of this thesis, I sum up the findings from the previous chapters to determine how this perspective of applying infrastructural analysis to post-apocalyptic cinema engages with a different perspective to analyse the films' power-relations.

Mad Max: Fury Road

Post-Apocalyptic Castles and the Flows of Society

“You know, hope is a mistake. If you can't fix what's broken, you'll ...you'll go insane”

Max Rockatansky – *Mad Max: Fury Road* (George Miller, 2015)

Mad Max: Fury Road (George Miller, 2015) tells a story of suppression and resistance in a post-apocalyptic wasteland. While traversing the endless wilderness, road warrior Max Rockatansky (Tom Hardy), stumbles across a large desert divided amongst three settlements, each ruled by their own warlord: the Bullet Farm controlled by the Bullet Farmer (Richard Carter), Gas Town controlled by the People Eater (John Howard) and The Citadel controlled by Immortan Joe (Hugh Keays-Byrne). While it is clear what two out of three of these settlements control and produce (ammunition from the Bullet Farm and petrol, called ‘guzzoline’, from Gas Town), they are peripheral to the primary setting of the Citadel which produces the most essential resource: water. While most of the action takes place in the surrounding wastelands, the Citadel acts as the central hub for survival as it provides vital resources and facilities to the population. As such, domination of the structure is essential for the new ruling class within *Fury Road*. The main source of conflict in the film occurs when one of Immortan Joe’s Lieutenants, Imperator Furiosa (Charlize Theron), betrays Joe and tries to escape with his wives (healthy young women held as prisoners) instead of completing her assigned trade mission between settlements.

In this chapter I analyse the Citadel as a form of infrastructure and explore how through its domination the ruler can dictate the power relationships in the region. First, I establish the dystopian setting of the world, analysing the landscape which the society is built upon. Then I undertake a comparison of the Citadel and medieval castles to demonstrate how it acts visually and functionally as a site of domination that enables societal control. Following on from this comparative reading, I use infrastructural theory to demonstrate how the structure of the Citadel allows whoever dominates it to control the flows of society which in turn allows the ruler to dominate the power relations. In this section I use Brian Larkin’s theory of the three flows of society (2013) and McKenzie Wark’s analysis of fluids specifically within *Fury Road* (2015) to demonstrate the conflicting masculine and feminine power structures. Finally, I compare how the two types of power structures require the Citadel to function and how the film portrays both critical and uncritical dystopian elements.

Mad Max: The Post-Apocalyptic Western

The landscape of *Fury Road* is the result of the events shown in the series' previous iterations: *Mad Max* (1979), *Mad Max 2* (1981) and *Mad Max Beyond Thunderdome* (1985), all directed by George Miller. While today the series is noted for its expert use of action, with critics such as Wark stating Miller creates "cinema of pure kinetics, where the action is the exposition," the original film was criticised for its depiction of violence (Morris, 2006: 82). Car chases and vehicular carnage are now trademarks of the franchise and play a pivotal role within the narratives to maintain trade and protection. Therefore, keeping the vehicles moving becomes extremely important for rulers to maintain control of resources and a paramilitary force. Through this connection of fuel needed to maintain trade and defence, fuel becomes *the* essential resource to the point that Peter Sobczynski (2015) states "gasoline has become a virtually priceless commodity that people will kill for in order to keep their vehicles moving." While the first film was set in a world on the verge of collapse after an energy crisis, the subsequent films take on a post-apocalyptic landscape after nuclear war, playing into the Cold War mentality of the early and mid-nineteen-eighties. While the second and third film did feature prominent structures (the settlement in *Mad Max 2*) and towns (Bartertown in *Beyond Thunderdome*) the primary focus was still on the vehicular action. The settlements in these films are focused on the production of resources; in *Mad Max 2* it was a refinery creating petroleum and in *Beyond Thunderdome* it was an undercity that used pig waste to generate electricity to power the town above.

The films have been described as post-apocalyptic westerns (Martin, 1992; Winn, 1997; Clarke, 2015) given their use of similar narrative forms and features. The main elements used in westerns that are applied to the franchise is what J. Emmett Winn calls the "two main ingredients: the hero and the locale" which are often defined by their appearance (1997). This hero is often white, male and violent, such as Clint Eastwood's character in Sergio Leone's *Man with No Name Trilogy*. The frontier-style desert landscape is predominant within westerns where horses are the primary form of transport with "wild savages" in the form of bandit gangs and Native American tribes scattered across the landscapes. Within these narratives the violence revolves around the trope of the battle of good versus evil, as the "civilized" versus the "savage" (Winn, 1997). Often these narratives have a lone cowboy adventuring across the frontier who enters the town and quickly finds himself at the centre of the narrative's conflict. The use of stoic heroes in conflict with the landscape is also common to post-apocalyptic cinema where "a world in which what little fabric of community remains is constantly threatened by rampaging bands of marauders, [is] challenged only by (self)righteous individuals" with Mick Broderick referencing *Mad Max* directly as an example (1993: 373). In the case of *Mad Max*, horses and "savages" are replaced with vehicles and marauding

bandits, but the narratives still revolve around the similar conflict between good and evil as Max acts in place of the lone cowboy coming to town.

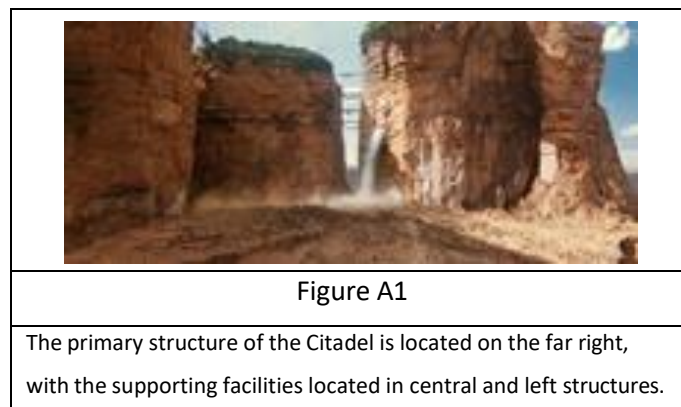
The result of the *Mad Max* franchise as a post-apocalyptic-western is its creation of a cognitive estrangement effect. The film shows an unknown world but “explains” it in a familiar way using tropes common to the collective psyche. In the original *Mad Max* this effect was achieved so that American viewers could find the world of futuristic Australia comprehensible “without feeling separated either geographically or culturally from the narrative events” due to it looking “familiar because of their experience with Western cinematic texts” (Winn, 1997). For Australian audiences, the film franchise used settings that mirrored Australian historical settings which achieved a similar cognitive estrangement effect. Meaghan Morris pays particular attention to the society in the third film, one that is based on convict labour, which she argues “revised the dreams and nightmares of white settler mythology as well as probing fears of a nuclear future” (2006: 83). By combining historical settings with current fears (at least at the time of its 1985 release) it links the apocalypse to the present “as a potential of the spectator’s present; the film always being ‘a few years from now’ in a world a little worse than the one we know” (Morris, 2006: 83). However, the ending of *Beyond Thunderdome*, Morris argues, also played into the mentality of Australian society of the time as she argues “it leads to the future that the Australian Labour Government of 1993-1996 promoted in its utopian moments: an open, tolerant, enterprising, ‘clever’ society, creating new industries or recycling the debris of the old, welcoming people everywhere, while retaining the good old white Australian values of collectivism, historical consciousness and care for social welfare” (2006: 95-96).

Fury Road both continues trends from the previous films while providing new digressions from the series. While the character of Max is familiar, he acts more as the audience’s guide to the world, where Furiosa takes on the mantle of protagonist. Another divergence from the previous films is in the scale of the settlements as the Citadel dwarfs any structure previously seen, and its ability to dictate all flows of society is explored visually in great depth while the dialogue remains laconic. This allows the images to dominate the film’s narrative. While the vehicular combat is important to the film’s world, the vehicles themselves need the support of the central structure of the Citadel to continue to dominate the surroundings. This is seen in Joe’s ability to control and influence the entire region from the Citadel as a hub for flows within the wasteland, compared to the minimal influence wielded by the nomadic bandits, called “Rock Riders.” This is because the Rock Riders are unable to produce or accumulate resources due to not having a permanent structure or base. Therefore, we see that control of the structures and settlements is essential to grow a society within the world of *Fury Road*.

The Structure of *Fury Road*

Mick Broderick states that “in order to represent the unthinkable, scenarists have returned to familiar mythological and iconographic terrains depicting long-term survival” (1993: 370-371). In the case of the unthinkable wastelands of *Fury Road*, director George Miller and production designer Colin Gibson returned to familiar iconography, like the castle, as the structure for survival. In explaining how he designed the Citadel, Gibson has noted that historical sites such as Petra in Jordan were used as inspiration, and said that the process “was more of a historical search on my part to look at what civilizations did in extremes” (Stamp, 2016). Petra is a large fortification carved into a rock-face that had its own water management system which allowed settlement to occur in an arid region. It also became a major trade centre connecting nations in the Middle East to nations in the Far East such as China, Arabia, Egypt and India.⁹ This historical search and return to the “familiar” to explain the “unthinkable” lays the foundation for how the Citadel resembles historical fortifications like Petra and functions like a medieval castle.¹⁰



These visual aspects of a castle are evident in the architecture of the Citadel, and is similarly the result of the landscape, available resources, skills of the population and its required purpose. The Citadel is the collective name for the three huge vertical structures carved into pre-existing rocks that are connected by bridges made of scaffolding (Fig. A1).




⁹ For more information on Petra see <https://whc.unesco.org/en/list/326/>.



¹⁰ In medieval society, every castle was the result of the unique combination of the landscape, skills of the population, available resources and the purpose required of the structure (Crowther, 2017). While this does mean that each castle was unique, there were a set of characteristics that were common amongst them: a keep, a bailey, resource production, stables, and defensive features such as a gatehouse and curtain wall (Crowther, 2017). The keep was the central structure in the castle complex and was the most strongly defended point which was used to defend the lord, his guests and relatives. The keep was usually tall and thick enough to make direct attacks seem improbable. The bailey was a fortified enclosure that contained the domestic buildings and housed the lord’s loyalists. Within the bailey the stables, kitchens and chapel were held. The curtain wall was the defensive structure that surrounded the complex, while the gatehouse acted as the weakest point in the wall but was essential for entrance and exit to the castle.

The primary structure has the deep-water pumps as well as the apparatus required to turn the flow of water on and off. It also acts as the keep, housing Joe, his relatives and his loyalists. The other two structures act as the bailey containing domestic buildings such as the medical bay (Fig. A2) and the “chop-shop” required to create the vehicles and acts in place of the stables where vehicles are the new horses (Fig. A3). On top of the structures, we see the only greenery in the area (Fig. A4), presumably for food production.

	
Figure A2	Figure A3
Part of the medical bay. Here human blood bags are held upside down feeding blood directly into the War Boys	Shot within the chop shop. The shot shows the Skull imagery of the Primary structure in the background


Figure A4
Top of the Citadel showing the greenery growing.

While the Citadel does not have a curtain wall, the huge vertical structures carved into the thick rock face negate the need for walls while still containing a gatehouse in the form of an elevator system. This elevator is the only way up and down the structure that is shown (similar to a gatehouse being the only way in and out of a castle) and is powered by a human-run pulley system controlled from within the structure (Fig. A5 and A6). My purpose in establishing the Citadel’s resemblance to a castle is that both are single structures (as opposed to a networked city) that contain multiple pieces of critical infrastructure within the defensive parameters of the structure. While this restricts the expansive capabilities of the society, it does protect these crucial facilities, allowing them to operate even when under attack.

	
<p>Figure A5</p>	<p>Figure A6</p>
<p>The human-powered cog system that pulls up the elevator</p>	<p>The platform that is elevated to go up and down the Citadel.</p>

The primary role required of the Citadel is to produce the only source of water in the wasteland, and the structure not only does this, but contains it to monopolise the resource and grants Joe the most essential source of wealth in *Fury Road*. This monopoly of the resource establishes it as the source of wealth from which Joe draws his control and the Citadel, as the water's producer, becomes the site that he needs to control and defend in order to maintain this dominance.

Charles Coulson claims that in medieval society, "as soon as wealth for survival was accumulated ... demarcation and defence was required" (2003: 15) and therefore castles became sites "for rulers to demonstrate their wealth and power to the local populace" (Cartwright, 2018). Through this power, castles allowed nearly all functions of government to fall to the lord's private control and formed the essential element to feudalism (Coulson, 2003: 18).¹¹ Modern scholars have looked beyond the military function and examined, similar to the effect of infrastructural inversion, the socio-political factors and agendas that created castle societies. As a result of this, "castles are now seen in terms of their social and cultural roles" (Johnson, 2018: 52) where they became the hubs for social, economic and political flows (Coulson, 2003: 21, 102; Johnson, 2018: 53).¹²

Castles can invoke notions associated with feudalism due to the structures being synonymously acquainted with medieval society. Such feudalistic notions include enforcing a strict class system due to the privileged classes using the structure to enforce hierarchies over the population by dominating the societal flows such as trade and religion, that use castles as a hub. These elements are also evident within the society surrounding the Citadel as it was designed for


¹¹ This created a manorial society where the population around the castles were bound to the structure where every person needed to fulfil their "proper station" (Coulson, 2003: 109). This meant that in return for the services the castles provided (protection and resources), the population owed the lord services in the form of upkeep and defence (Coulson, 2003: 21-22).

¹² However, castles still did primarily serve the privileged classes where the structures acted as symbols of "higher status" (Coulson, 2003: 110, 126).

similar effect as Gibson states “we really envisioned the story as a fall back towards fascism and feudalism as civilization fell apart” (Stamp, 2016) and Miller describes the society as “forward into the past. We regress to a neo-medieval dark age where there are no rules other than to survive” (Barco, 2015).¹³

The primary source of wealth and power that allows Joe to dominate the politics of the wasteland is in his monopolisation of water production. From this, Joe dominates the surrounding classes, forcing them to fulfil the roles he determines for them, if they want access to the resource. He does this to his loyalists, such as the other warlords who rely on him for trade, as well as the underclass, called “the Wretched”, who live at the Citadel base waiting for Joe to turn on the water. The Wretched are seen as a poor, starved and diseased mass of people (Fig. A7), far outnumbering Joe and his loyalists but without any means of disrupting the current power structure. Beyond the Citadel’s economic and political role, it also has religious connotations, taking on the attributes of a church where Joe’s warriors, called War Boys, worship their “V8” God with “rituals and recit[ing] incantations in order to win Immortan Joe’s approval and hope to win a glorious death” (McLean, 2017: 372). These rituals and incantations take place at an altar made of steering wheels before the War Boys take an “offering” in the form of a wheel and beginning their journey in the vehicles, reciting the verse “by my duty I honour him” (Fig. A8). The “him” in the incantation refers to Joe who acts as their prophet. The religious undertones are also extended to the water as an object as Bonnie McLean states that “basic resources like water become sacred objects to be worshipped” and Joe, as the one to grant access to it gets treated “with the reverence accorded to a deity” (2017: 380). What this description tells us is that the Citadel is more than just a two-dimensional military hub, but instead is the centre of politics, trade, and religion within the wastelands. The Citadel is able to complete these functions by containing the critical infrastructure that not only sustains life, but also culture.

¹³ Not only are both political systems products of certain historical periods (feudalism and Medieval Europe, and fascism and predominantly in the early to mid-twentieth century across Europe with adherents in the Americas, Africa and Asia) but they also share some common characteristics such as militaristic nationalism, contempt for democracy and liberalism, and a belief in a natural social hierarchy.

	
Figure A7	Figure A8
Close up shot of the Wretched waiting with bowls for Joe to turn on the water flow.	The War Boys enacting rituals at the shrine to the V8 God.

Infrastructures have been argued to “emerge out of and store within them forms of desire and fantasy and can take on fetish-like aspects that sometimes can be wholly autonomous from their technical function” (Larkin, 2013:329). Similar “fantasies” are seen in castle imagery as the structures capture the imagination by embodying the romantic ideals of Medieval Europe, such as chivalry, grand battles and sacrifice for crown and country (Crowther, 2017). This “fantasy” is evident for the audience in the Citadel by its visual comparison to fortifications like Petra and its functioning as a castle. This helps establish the Citadel as the structure at the centre of power in the wastelands by invoking notions associated with medieval castles and the role they played in feudalistic societies. By analysing the Citadel in a similar way to how the infrastructural inversion can be used to reveal the socio-political agendas, it is seen how this structure functions as more than just a piece of defensive infrastructure but also as a hub that dictates the flows of society in the form of goods, people and ideas.

Turning Slaves into Cogs

In order for the flows of society to be dominated within the Citadel, the people themselves have been transformed into part of the infrastructure. Only the ruling class is given enough agency to be capable of action and reaction. Anna Mae Duane argues that the slavery system aimed to transform humans into “a being of pure efficiency - a cog in an endlessly whirring machine” (2020). In the antebellum South of the United States, this was done to raise productivity without technological innovations, utilising slaves *as* the technology. A similar effect is evident within the Citadel as the underclasses are utilised within the structure in place of technologies to run the systems: women are strapped to milking apparatuses, like cattle in a dairy farm, endlessly producing “mother’s milk” for Joe’s use; the Wretched are harnessed to giant wheels, turning them to raise the elevator system that attaches the Citadel to the ground. Even Max is momentarily reduced to part of the

infrastructure as he is strapped to an apparatus in the medical bay that turns him into a human blood-bag as his blood is fed directly into the War Boy Nux (Nicholas Hoult). These examples show how humans in this infrastructure are denied agency, reducing them to the role of cogs in the machine. This also reinforces the medieval notion that within feudalistic societies every person needed to observe their “proper” station (Coulson, 2003: 109). Within the Citadel these stations are the underclass operating within the infrastructure as simple, mindless cogs, while the ruling class operates with complete agency, dictating the rules to those below their station. Therefore, through this system, we see that it is humans, not technological innovations that become essential to maintaining the Citadel’s infrastructures

The Flows and Fluids of The Citadel

Infrastructure has been described as “built networks that facilitate the flow of goods, people or ideas and allow for their exchange over space” by Larkin (2012, 328). The flow of ideas stem from religion and education, while the flow of goods revolves around trade and production such as building materials and food harvesting. The flow of people relies on the ability for populations to move and utilise the infrastructures. These three flows are also applicable to single structures like a castle; as Matthew Johnson argues “castles work to control, facilitate, and direct flows; these flows can be ideological, material, or human, or most frequently a combination of all three” (2018: 53). Therefore, we see how these flows are central to any infrastructural style regardless of size, as goods, people and ideas play central roles in the functioning of all societies. Structures that are central to these flows allow the ruling class to dictate how these flows interact with the society around them as they become vital to the networks that are built around them, such as trade routes that facilitate the exchange of flows.

Within *Fury Road*, these flows can be seen as the movement around what Wark calls the “four fluids” that control this world (2015). These fluids are blood, guzzoline, water and milk. While all four are material goods, they also interact with the other flows. Guzzoline works to facilitate the flow of movement as it fuels the war machines that are required to transverse the wastelands. These machines, that require guzzoline to operate, maintain the Citadel’s trade networks between the other settlements to supply the structure with ammunition and more guzzoline. While guzzoline is required to keep the war machines in motion, they equally require the Citadel’s engineering infrastructure in the form of the chop shops to maintain them and to create new ones. Blood, harvested from captured human blood bags, is needed to maintain the anaemic War Boys that Joe uses as a personal militia, protecting the trade network from bandits within the wasteland as well as to physically dominate the Wretched. Water and milk are the primary trade resources Joe has, with

both being harvested from within the Citadel complex; milk is drawn directly from imprisoned women attached to milking apparatuses, while water is pumped from the reserve below the surface. What these fluids and flows tell us about *Fury Road*'s infrastructure is that all these elements are heavily interconnected within the Citadel and each fluid contributes to the overall functioning of Joe's society. This demonstrates a complex and sophisticated infrastructural system established within the wastelands, despite its post-apocalyptic nature, that adds depth to the film's worldbuilding.

The Masculine Dystopia vs Feminine Utopia

It is important to note the two distinct styles of fluid production amongst the four, the aggressive blood and guzzoline, and the more passive milk and water. While the aggressive fluids require external harvesting through raids and trade, the passive fluid's production is located entirely within the Citadel complex, not requiring external factors. Wark interprets this divide as masculine (aggressive) versus feminine (passive) where the aggressive fluids require the feminine ones to function in the form of water to drink and mother's milk, as a metaphor for reproduction, to breed War Boys. However, in reverse, the feminine fluids do not require the masculine ones to function.¹⁴

These differences between the masculine and feminine in *Fury Road* extends beyond the styles of fluids and into the contrasting systems of control that are in conflict for domination of the Citadel. Much of the discourse surrounding *Fury Road* is around whether or not it is a feminist film (Boylan, Duane, Gill, Gurr, 2020). While this argument is still up for debate, what the sources do agree on is that *Fury Road*'s world is highly gendered and extends beyond the physical body, as seen by Wark's argument of gendered fluids, as well as into the systems of control in conflict for control of the Citadel. The two systems can be seen as a similar divide to what Michelle Yates describes as nature versus culture where "women and nature become the subordinate ground, the object, upon which dominant male-driven culture acts" (2017: 354).¹⁵ This logic follows the traditional Edenic recovery narrative where such stories reproduce the "binary dichotomy of passive, female nature and active, male culture" (Yates, 2017: 354).

¹⁴ Michelle Yates argues that the female "breeders" of the film become alienated from their bodies as they are kept constantly pregnant to not only produce milk but to produce children to be raised as War Boys (2017: 365). Yates argues this is a remnant of the capitalism still evident in *Fury Road* where "the female body was turned into an instrument for the reproduction of labour and the expansion of the work-force, treated as a natural breeding machine, functioning according to rhythms outside of women's control" (Federici, 2004 quoted in Yates, 2017: 363)

¹⁵ Stacy Alaimo describes this female association with nature writing "Mother earth, earth mothers, natural women, wild women, fertile fields, barren grounds, virgin lands, raped earths ... Casting woman as synonymous with nature actually constituted woman as 'woman', that is, as a completely sexed being. Defining woman as that which is mired in nature thrusts woman outside the domain of human subjectivity, rationality, and agency" (2000: 2).

Within *Fury Road*, the “male culture” is the apocalyptic-feudalism that dominates the Citadel’s governance. In this system, we see the outcome of Maria Lisboa’s argument of a reinstatement of the mindset prevalent at the end of the world (2011: 8) in the form of the masculine aggression that ended the world is now structuring survivor’s lives in the form of a “kill or be killed” society. This reinstated mindset continues to recreate itself, as noted by Wark who in her analysis of the masculine blood fluid argues “blood for blood just reproduces...its violence” (2015). Similar violent notions are seen within the other masculine fluid, guzzoline, as Wark notes the fluid “is about power, violence and death. It is what the city’s [the Citadel] war parties fight and die for”. The logical conclusion of this system is, as Michelle Gurr states “inevitable: hegemonic masculinity is a death drive” (2020). This masculine system of control acts as an uncritical dystopian view within the film, a system that cannot be salvaged, but rather only through an alternative can change be made, which in *Fury Road* comes in the form of the feminine system.

The feminine system in *Fury Road* disrupts the traditional Edenic recovery narrative upon Max and Furiosa’s return to the Citadel, as female passivity gives way to the dominance of the feminine, or as Yates says, “female nature gains agency” (2017: 354). This new system is based on creating a new Eden within the Citadel as the structure no longer becomes the hub of masculine aggression but rather a “vehicle for female leadership and female economic independence as well as social change and communisation” (Yates, 2017: 366). Gurr interprets this changed system by its contrast with the masculine system as she says, “if we are set up to believe that hegemonic masculinity—violent, dominating, controlling...is death, we are seemingly equally set up to believe that women...represent life” (2020). This contrast demonstrates the utopian ideals behind the feminine system that, like a critical dystopia, acts as a warning to real world systems as Gurr argues “we may possibly do more than merely survive, if humanity can escape the death drive of hegemonic masculinity that has in fact already pushed us past the brink of survivability” (2020). The beginnings of this alternate feminine system are seen at the end of the film as upon Furiosa and her allies’ return to the Citadel, their first act as new rulers is to no longer restrict which classes can and cannot rise up the Citadel by symbolically allowing everyone to use the elevator system as it raises Furiosa to the Penthouse. As this act is happening, the women previously strapped to the milking apparatuses turn on the flow of water, freely providing the fluid to the wretched below, again, acting as a symbolic gesture of a change in the Citadel’s power relations with the population.

However, while the two systems are ideologically dichotomous, both require the infrastructure of the Citadel to implement their goals. The masculine system is about domination through suppressing the “lower” classes (as seen by restricting water access to the Wretched) and monopolising resources for trade benefits (as seen by Joe dictating terms to the other warlords if

they want access to the water). In contrast, the feminine system is more equal and as Yates argues, is more communal. This is seen by the previously mentioned acts at the end of *Fury Road* that hint at the new system the feminine controllers implement that is based around equal access to resources (as seen by the turning on of the water) and free movement within the structure (as seen by the Wretched allowed to use the elevator). This gives the end of *Fury Road* a hopeful depiction of the future, where equality disrupts totalitarian tendencies, but a world Max cannot live in, seen by his immediate departure upon Furiosa's return to the Citadel. This is because Max is still a product of the masculine systems of violence and aggression, and just like how the masculine system cannot be salvaged in the film's world, so by association neither can Max, and as such he must depart the new world that he has no place in.

Snowpiercer

Trains and the Myth of the God Engine

“I belong to the front. You belong to the tail. When the foot seeks the place of the head, the sacred line is crossed. Know your place. Keep your place. Be a shoe.”

Minister Mason – *Snowpiercer* (Bong Joon-ho, 2013)

Bong Joon-ho’s 2013 adaption of *Le Transperceneige* (Jacques Lob & Jean-Marc Rochette, 1982), titled *Snowpiercer*, shows a world where the remnants of civilisation all live within a single train that circumnavigates the globe on a circular track. The story follows protagonist Curtis (Chris Evans) as he organises a rebellion of people living in the slums of the tail-section to revolt against their oppressors and fight their way through the train towards the front. During Curtis’s journey, he encounters the front-end passengers who live in complete contrast to him, with all the luxuries of the old world still evident. At the front resides the conductor, Wilford (Ed Harris), who lives alongside the “sacred” engine, a ceaseless machine that powers the entire train. The rebellion aims to overthrow the old hierarchies and redistribute power evenly across the train, but when Curtis is finally faced with the opportunity of taking control of the system, he finds out that the train is in a state of constant breakdown where the means of maintaining the system involves the use of human labour. At this point Curtis believes the system to be so corrupted that there is no hope for its salvation. Instead, he takes the option offered by security specialist turned drug addict Namgoong Minsu (Song Kang-ho) and allows the train to be breached in the hopes of starting anew on the planet’s frozen surface.

In this chapter I analyse the train as a form of infrastructure that dominates the contained society through the creation and enforcement of a class system. First, I establish the dystopian world and the circumstances leading up to its creation. This section will also include an overview of the internally created world of a closed ecosystem that needs to be maintained for the survival of humanity. I then compare the *Snowpiercer* train to its nineteenth-century counterparts to demonstrate their similar systems of creating and enforcing class-based systems. This section also shows *Snowpiercer*’s diversions from this historical example by demonstrating the extreme measures that the ruling classes implement to forcefully maintain the class structures and dehumanise the tail-section occupants. The third section in this chapter offers an analysis of the engine’s constant state of breakdown, which acts as an example of infrastructural inversion, exposing the ideological underpinning of the train’s system. In this section, there is also an analysis of how innovations to “fix” the engine aim to deceive the occupants into believing in the “eternal”

myth, and work to maintain the status quo. Finally, I demonstrate how *Snowpiercer* acts as an uncritical dystopia, where the only way to escape the system is to start anew due to the infrastructure being too corrupt.

The Frozen Wastelands: Ecosystems and Ecoterrorism

At the opening of *Snowpiercer*, seventeen years have passed since the global destruction of the environment and of society. This destruction was caused by the radical choice to distribute a new chemical called “CW-7” into the atmosphere in the hopes of reversing the damaging results of human-caused global warming. However, CW-7 critically backfires and creates a new ice age that destroys all life. This results in the rapid cooling and freezing of the world, generating a new ice age and spawning a human-created environment akin to the one shown in *The Day After Tomorrow* (Roland Emmerich, 2004). Narratively, CW-7 acts as the first introduced novum of the film, as it propels the film’s world out of the present moment into the future to contextualise this new setting. This context is portrayed in the film with the use of diegetic newscast at the opening of the film, with the sequence ending with the superimposed text stating “soon after dispersing CW-7 the world froze. All life became extinct.” The use of newscast creates a sense of realism around the events evoking a sense of cognitive estrangement through its use of reporting fiction as if it was fact (Suvin, 1979). This world, therefore, aims to present itself as a potential outcome of current dystopian trends, where due to human-induced environmental decay, a radical scientific solution is employed despite resistance. This resistance is introduced in the newscast where there is mention of protests from environmental groups and developing nations. Instead, seventy-nine countries on their own accord disperse the chemical which ends up affecting the entire globe.¹⁶

Within the film’s new world, the *Snowpiercer* train acts as the only remaining hub for society. It is separated from the rest of the world which is presumed to remain uninhabitable. This creates a type of closed ecosystem within the train, where the ruling class aims to maintain ecological equilibrium. With closed ecosystems in modern society still being primarily experimental

¹⁶ Similar circumstances are seen in modern society where according to the World Bank and the United Nations Refugee Agency four out of the top five most polluting countries are considered developed nations while it has been noted that the countries most at risk from the effects of pollution are developing nations. According to the World Bank’s data from 2014 the top 5 emitters of carbon dioxide in millions of kilotons added to the atmosphere are China (10.3m kt), United States (5.3m kt), India (2.2 m kt), Russia (1.7m kt) and Japan (1.2m kt).
Data provided by
https://data.worldbank.org/indicator/EN.ATM.CO2E.KT?most_recent_value_desc=true&view=chart,
<https://eacnur.org/blog/cuales-los-paises-mas-contaminantes-tc-alt45664n-o-pstn-o-pst/>,
<https://healthyhumanlife.com/blogs/news/top-polluting-countries-and>
<https://news.mongabay.com/2021/07/eight-of-the-10-nations-most-at-risk-from-climate-and-toxic-pollution-in-africa-study/>.

(Gurney, McKinstry & Nisbet, 1983: 99-100), the example in *Snowpiercer*, therefore, becomes the second novum of the film. A closed ecosystem is inherently the opposite of a networked city, where all external connections are removed (Bartelmus, Gieri, Shah & Shih, 1996: 15) and creating ecological equilibrium is of the utmost importance (Anishchenko, et al, 2020: 538). This is important as, in the world of the film, networked cities are now extinct and are thought to be impossible to recreate due to the frozen landscape. However, *Snowpiercer*, as a train, is not a completely closed ecosystem as it requires the tracks to survive as well as freshwater that is provided by the train's front which smashes ice and ingests it while moving. The tracks act as the only remaining infrastructure from the old, networked world, allowing the train to continue moving, which prevents it freezing and allows for the continuous supply of water. By utilising this last piece of old world infrastructure, we see how the train has become isolated from the past as it passes by multiple frozen cities and their respective infrastructures which have now become unusable. As mentioned, balancing the input and output of ecological resources such as food, becomes extremely important in a closed ecosystem and the train in *Snowpiercer* cannot naturally create an equilibrium. This is because of two interacting elements: the human factor (such as overbreeding resulting in overconsumption); and the engineering factor (the train does not have the production capabilities to rebuild broken parts).

As a result, equilibrium needs to be enforced. This enforcement is undertaken through the policing of the different sections, such as keeping the overcrowded tail-section isolated at the rear of the train away from the upper-class front-sectioners, and restricting their access to essential resources such as food. The overcrowded tail-section's enforcement is implemented using two contrasting methods where they use the visible guards to physically subdue these passengers, while using embedded agents to subtly circulate discontent encouraging the passengers to rebel. The latter is used to reduce population numbers by enticing the tail-sectioners with hopes of redistributing power on the train. This is seen by Gilliam (John Hurt), as the father type-figure to Curtis, encouraging him to take the engine from Wilford, creating the central conflict of the film. When Wilford informs Curtis of Gilliam's betrayal, Wilford justifies his policy by stating: "We don't have time for true natural selection. We would all be hideously overcrowded and starved waiting for that. The next best solution is to have individual units kill off other individual units."

This dialogue also shows the brutality evident in *Snowpiercer* that is used to create what Gerry Canavan calls "a feudal society", where torture and extreme punishment are used to enforce the hierarchy despite it having "the slimmest relevance to the actual conditions on the train" (2014: 16). What this means is that with an even redistribution of power, including equal food and facility access, the train could continue to function as it does, and would not require its arbitrary class-

system. Canavan argues this arbitrary system has led critics to describe the class system in *Snowpiercer* as “capitalist”, continuing the class distinctions of the old world even though they “have no force or logic in the world afterwards” (Canavan, 2014: 15-16). The old-world structure used on the train is based on the carriage class passengers were assigned when they, or their ancestors, first entered it. We are informed of this by Tilda Swinton’s character Minister Mason, a pseudo-politician acting as one of Wilford’s lieutenants, who explains to the tail-section: “in the beginning, order was proscribed by your ticket: First Class, Economy, and freeloaders like you...Now, as in the beginning, I belong to the front. You belong to the tail.” However, what Mason’s account does not address is that the “freeloaders” of the tail-section were refugees allowed on the train to survive the frozen world, and not the class of intended guests for the train’s original purpose as a luxury liner.

Despite this noticeable class system, Canavan argues that there is in fact “nothing particularly capitalistic about the political economy on the train.” Instead, he argues that the concept of “capitalist realism” is more appropriate to be applied to understanding how Wilford justifies his actions (Canavan, 2014:16). According to Canavan’s use of the concept, he argues that “the contemporary moment insists that any deviation from existing power structures would be suicide: no alternative is possible; all alternatives to the system are the same as death; those in charge of the system are always doing what they do no matter how horrible it seems in the name of collective survival” (Canavan, 2014: 16). Within *Snowpiercer*, using this logic, Wilford justifies his inhumane treatment of the tail-sectioners as necessary as he believes the alternative to his system is death in the frozen wastelands. However, despite the logic of capitalist realism being prevalent, as mentioned Canavan believes the system to be feudalistic as the guards happily enforce it as long as it keeps them off the bottom of the class structure. The appearance of feudalistic tendencies in dystopian films has been noted by Amy Kaufman who states that torture and extreme punishment are “prevalent in each dystopian world” while remaining “distinctly neomedieval” (2013: 12) and can be similarly applied to the type of neo-feudalistic society as discussed in relation to *Fury Road*.

By looking at the commonalities between a closed ecosystem and a feudal society, it can be seen how they both have the ability to function when separated from a wider networked system, relying on infrastructures located either within or in close proximity to the central piece of infrastructure. In *Snowpiercer* both examples are evident: feudalistic tendencies are visible in how Wilford attempts to create and enforce a closed ecosystem to “save” humanity.

Closed ecosystems have been depicted in a range of other SF films: there are stationary structures such as in *Total Recall* (Paul Verhoeven, 1990), with the Mars habitat that creates a liveable ecosystem through the supply of air, and structures constantly in motion, such as the

spacecrafts seen in *Wall-E* (Andrew Stanton, 2008) and *Passengers* (Morten Tyldum, 2016). These latter examples have all critical infrastructure located within the vessel so as to sustain the population and maintain the infrastructure. What examples like those mentioned do have in common is that the structures enable their respective rulers to enforce their chosen power structures and, similar to the previous example seen in *Mad Max: Fury Road*, they act as the hub for the flows of society.

Life on the Train: Class and Punishment

While trains have been seen in cinema since the Lumière brothers' *The Arrival of a Train* in 1895, Adam O'Brien argues that it is "difficult to conceive of trains as a graspable cinematic motif or narrative convention" (2019: 9). This is because there are significant differences between the different forms of trains; from the urban subway to freight trains to intercontinental passenger trains, each type of train has its own set of contrasting uses. This diverse representation of trains as cinematic structures is noticeable when examples are compared, such as their use in *Unstoppable* (Tony Scott, 2010), *Under Siege 2: Dark Territory* (Murphy, 1995), and *Murder on the Orient Express* (Lumet, 1974). However all depictions of trains do share commonalities: restricted movement due to the necessity of tracks, an engine to move, and a crew needed to maintain and operate the train. Within *Snowpiercer*, the train resembles a traditional passenger train with carriages demarcating boundaries between classes, like those of a nineteenth-century European train.

The class system inherent in nineteenth-century European train travel was due to "the compartment [being] an expression of European traditions and class relationships" (Schivelbusch, 2014: 88). The carriages of the higher classes had individual compartments that resembled the luxuries of "coaches mounted on rails" while the lower classes were grouped together and their carriages "looked more like covered boxcars than passenger cars" (Schivelbusch, 2014: 72). The economist Constantin Pecqueur believed that trains had the possibility to "advance the reign of truly fraternal social relations and do more for the sentiments of equality than the most exalted sermons of the tribunes of democracy" (Schivelbusch, 2014: 71) by causing all classes to travel together, juxtaposing their varied social positions and backgrounds. However, Pecqueur also argued that without a form of pre-existing equality between classes and races in the society from which the passengers originate, these trains might end up creating subdivision in the carriages. This would result in "a separation and distinction between social and economic ranks" (Schivelbusch, 2014: 71). This contrasting of potential outcomes within nineteenth-century European train travel shows the opposing utopian and dystopian possibilities of the system; there is an equal chance of creating a new system based on equality as there is of reinforcing external inequality-based systems. Both of

these outcomes are evident within the train in *Snowpiercer* where in the tail-section, all races and backgrounds are integrated into the same section where there are seemingly no racial tensions, and a developing sense of class solidarity. In contrast, the front section is seen to be entirely white and wealthy, where the only other races in these sections are workers and servants.

The *Snowpiercer* train was originally intended as a luxury holiday train and as such it holds many carriages fit for this purpose, including bars, saunas, beauty salons, tailors, and even an aquarium with a sushi bar. Housing for passengers not intended for this lifestyle was seemingly an afterthought when Wilford altered the train to house a closed ecosystem for the survival of humanity. As such, the tail-sectioners live in what was presumably intended as a cargo hold, behind food storage and production, out of sight from the luxurious life of the front-sectioners. Due to their location on the train, the tail-sectioners live a life akin to cargo, taking on the same classification as lower-class passengers on English nineteenth-century trains, where up until the 1840s they were considered “freight goods” rather than “passengers” (Schivelbusch, 2014: 72). The tail-sectioners are treated as though they were part of a chattel slavery system where slaves had no rights or freedom to move, and were not paid for labour, as they were classified as “things” and as such the “owner” was obliged to only provide food and shelter (Asante, 2007). However, unlike a real chattel slavery system, the tail-sectioners do not work, but are kept as a resource, farmed for children (a subject to which I return below) and old world expertise (such as a tail-sectioner taken to the front when it is revealed he played violin professionally). These systems desubjectify human beings, turning them into objects that can be used to maintain infrastructures, like in a chattel slavery system, or easily transported without ethical considerations such as by nineteenth-century trains. This is seen in *Snowpiercer* by the tail-sectioners unable to move between carriages due to constant guard patrols and food being supplied externally to their carriages in the form of protein bars.¹⁷ This form of classification dehumanizes the lower-class passengers, allowing the ruling class to justify their inhumane treatment.

An example of this punishment is seen when the tail-section character of Andrew (Ewen Bremner) is harshly punished after throwing his shoe at Claude (Emma Levie), Wilford’s servant. This occurs because Claude, after conducting a “medical inspection,” chooses to take Andrew’s son to serve further up the train to fix the breakdowns within the engine (a subject to which I return below). For punishment, Andrew has his arm locked outside the train for seven minutes (a carefully calculated number using current location and altitude). This results in his arm being frozen solid and

¹⁷ It is interesting to note that the protein bars take on a similar role as Soylent Green in the film of the same name where the revelation of what the bars are made of is treated as a horrendous atrocity towards the consuming public. However, in *Snowpiercer* the bars are only made of ground-up bugs, where in *Soylent Green* it is made of recycled human bodies.

then subsequently shattered with a hammer. This punishment also reinforces the contrast between the inside and outside of the train, where inside the train means life through order and hierarchies, while outside means death and chaos (this contrast of life and death also reinforces the claims of capitalist realism). During the time Andrew's arm was outside the train, the shoe is brought out on a spotless silver platter; this acts as a metaphor for the notion that the tail-sectioners, represented by the shoe (as an item worn on the lowest part of the body), owe their lives on the train to Wilford (acting as the "head" of the train) who handed them salvation rather than earning it (Wilford served salvation to the tail-sectioners on a silver-platter), and therefore the tail-section should be grateful for the conditions in which they find themselves. The act of throwing the shoe shows the tail-section (represented by the shoe) acting symbolically against their "saviour" by attacking one of Wilford's Lieutenants as proxy. This example demonstrates the class divide in the film's world with the front-section being the superior class that "deserve" their place at the "head" due to paying for their ticket onto the train when they first embarked, while the tail-section "shoe" should be subservient to the man who saved them initially.

Eternally Breaking Down: Machinations of Machines

Studies of breakdowns, like Bowker and Star's (1999), examine the "infrastructural inversion" as infrastructures, previously considered "invisible," are brought to the surface and become explainable by "the social forces, interests, or ideologies that went into making them" (Harvey, Jenson & Morita, 2017: 3). This allows for the decoding of social, cultural, or political motives evident in a given system (Harvey, Jenson & Morita, 2017: 3). A breakdown within an engineered system will continue to "give rise to emergent effects" (Harvey, Jenson & Morita, 2017: 5) through the need to fix the infrastructure, as the ideology underlying such a system is brought to the fore when it needs to be fixed.¹⁸ In her study of the breakdown of infrastructure in socialist Vietnam, Christina Schwenkel comments that in certain circumstances routine breakdowns allowed for a generation of innovation and improvisation (2015: 520). Steven Jackson advances a similar argument, stating that breakdowns should not be considered "as barriers or irreducible divides, but rather dynamic resources and engines for change" (2014: 230). However, Schwenkel also states that breakdowns can expose or reinforce hierarchies in society (2014: 522). This occurs when the controlling class tasked with fixing the breakdowns use the opportunity to reinforce a hierarchy that maintains their stature above the workers who are ordered to maintain the infrastructure while being under the command of those controllers.

¹⁸ An emergent effect here is explained as an unplanned outcome of an engineered system that is breaking down while continuing to create situations that effect the system. For example, a broken sewage system can continue to generate health hazards upon the effected area. (Harvey, Jenson & Morita, 2017: 5).

The primary example of infrastructural breakdown in *Snowpiercer* is the use of children as replacements for “extinct” mechanical parts.¹⁹ This is revealed in the film’s final act when Curtis enters the front carriage in which Wilford lives alongside the engine. Enticed by the offer to take over from Wilford as the train’s ruler, it takes the unveiling of the children being used as replacement parts within the engine to convince him to destroy the system. As with modern infrastructure concealed below the surface, such as cables and pipes, the children are also hidden amongst the inner workings of the engine. Curtis becomes aware of their presence when a floor panel is lifted up and a child is shown to be sitting in a small space within the cogs of the surrounding machine, using his arms to move the mechanism. As Curtis attempts to free the child, another child appears from behind a different panel and heads directly to his preordained station in the engine, showing no hesitation or even noticing Curtis trying to free them. The children act as a form of innovation to the constant breakdown of the engine, as when parts go extinct, children are the right size to fit into the machine to fulfil that part’s role. However, this innovation also ultimately acts as the catalyst for Curtis’s destruction of the train.

The use of children as parts also acts as an emergent effect within the engineered system as it introduces the new system of taking children from the tail section to fulfil a role in the breaking engine. This gives a new reason to maintain the tail-section class as they are used to reproduce children for parts instead of taking children from the loyalist front sections. Therefore, this breakdown is not used as an opportunity to implement change within the system, but rather to reinforce existing hierarchies, keeping the tail-section subservient and feeding the continued lifestyle of the front-section by maintaining the engine that is needed to support their way of life. As Wilford only takes tail-section children, he is able to maintain the support of his loyalists by allowing them to continue their lifestyle in ignorance of the engine’s failures.

After the engine’s breakdown is revealed to Curtis, Wilford justifies it by claiming that everyone, even children, need to fulfil their preordained role within the system to enable its continuation. However, this continuation is only based on Wilford’s notion that the system “needs” to continue as it currently is, which would mean keeping children as slaves to the engine, and the tail-sectioners subservient to the front-sectioners. This creates a false “need” in the system, like capitalist realism, of maintaining current standings out of fear of the alternative. The manner by which Wilford attempts to hide the breakdowns involves deceiving the train into believing in the eternity of the engine, creating what Schivelbusch called a “world machine” as nature is submitted

¹⁹ Within the context of the film “extinct” refers to anything that has been unable to be reproduced within the infrastructure of the train. Typically, these are mechanical parts, such as levers and cogs, due to the train not having metal production facilities located on the train. However, the term is also applied to organic examples in the film, such as the tail-sectioners being led to believe that chicken had gone extinct.

to the rules of the technologies and machines (2014: xxi), or in the case of *Snowpiercer*, unknowingly Wilford made the occupants subservient to the continuation of the engine through children (as the representative of nature) being submissive to the rules of the engine. Schivelbusch further argues that the “world machine” is the result of “every new technology [being] an attempt to submit nature to its rules” and results in a “machination, doppelganger, or alias of nature”. But as he notes, it is not nature, or even humanity that rules this “world machine”, but rather the technologies themselves as we become subservient to them in order to survive (2014: xxi-xxii). In *Snowpiercer*, this is what the train’s engine has done as it creates the false “need” Wilford uses to justify his belief that survival on the train is reliant on the notion that nature and subsequently humanity “need” to be subservient to the engine. But as Schivelbusch states “let [the technologies] derail, explode, crash, or simply pull the plug, and both world machines come to an immediate halt” (2014: xxii). However, this can be avoided through human interaction such as Wilford’s innovation of substituting parts for children. In doing this, Wilford continues to blur the lines between man and machine, reinforcing humanity’s subservience to technology. This is seen by the children who operate the engine that are seemingly programmed to fulfil a function within the machine, with no sense of humanity left as they ignore any attempts of salvation.

These blurred lines between human and machine returns the term “machine” to its preindustrial definition of the effect of being tricked or cheated, such as in “machination” or “*deus ex machina*” (Schivelbusch, 2014: xxi). Both of these terms originate from theatre and suggest the deception of the audience by hidden apparatuses.²⁰ Within *Snowpiercer* the occupants of the train are deceived to believe in the eternal engine, taught to worship it as a deity as seen by the indoctrination the front section children are subjected to as part of their “education.” This involves incantations with the lines “what happens if the engine stops? We all freeze and die” and “The engine is eternal, yes! The engine is forever, yes!” before ending with the line “who is the reason why? Wilford, yeah!” However, this promise of eternal salvation is a trick played by Wilford and the machine itself to hide the “backstage” extinction and breakdown. This is echoed by infrastructure as it suggests a type of “trickery” by remaining invisible as long as it is in working order, and only through its breakdown is it revealed. This is similar to the theatrical machination that hides its apparatuses from the audience (or publics, for infrastructure) allowing the show to continue with the audience none the wiser.

This trickery can be extended beyond the engine to the whole train itself. The train aims to make its occupants believe that humanity *needs* the train to survive. However, the film disproves

²⁰ For example, *deus ex machina*’s origin in Greek plays involved the actor playing a deity being physically lowered by a crane system into the stage area while the crane itself was hidden (Chondros, et al, 2013: 172)

this by showing a depreciating ice level as noted by Namgoong who states “there's something I look at every New Year. A crashed airplane under the snow. All I saw ten years ago was just the tail. Now the body and wings are peeking out. Less ice and snow means it's melting”, and a polar bear at the film’s conclusion, shown in the distance as the survivors walk across the landscape, demonstrating that life is possible on the planet. This creates another “false need” in the system where both the front and the tail sections are convinced of the trickery of the machine. The front section believes it because in doing so they can maintain their life of luxury and ignorance; all they need to do is believe the system works as long as the tail-section is subservient to them. In contrast, the tail-section have been convinced that they “need” to take the engine to control the train, but as Frase argues the only outcome to this plan is “merely tak[ing] over the existing social machinery rather than attempting to transcend it” (2014). However, the option to “transcend” the train system is presented to Curtis by Namgoong by showing him an exit from the train, and therefore from its systems, located just before the entrance to the engine room. In this scene, Curtis wants to use a bomb made from the addictive drug kronole, an industrial waste product, to open the door to the engine room to face Wilford, but Namgoong offers an alternative option stating “you know what I really want? I want to open the gate... but not this gate [gestures to the door to the engine room]. That one [points to a door on the side of the train]. The gate to the outside world. It's been frozen shut for 18 years. You might take it as a wall. But it's a fucking gate. Let's open it and just get the hell out.” Visually, this choice is introduced in a medium-wide shot, with Curtis right-facing towards the engine room door and Namgoong with his back to the door, facing left towards the tail section. The space between them leaves room for the door to be seen between them, forcing the viewer to see the door physically and metaphorically between them. Initially Curtis is hesitant to take this option, tricked by the train into believing it would be suicide to leave. However, after the breakdown within the engine is revealed to him, he accepts that taking over the existing social machinery would only continue these trends, and instead, the only hope for a new start is to completely start over.

The Utopian Hopes of Destroying a System

What this trickery of the system tells us about the infrastructure in *Snowpiercer* is that the system only works if its users are convinced it works. This is similar to the way that the success of an infrastructural platform depends on the emergence of a collective to utilize it (Collier, Mizes & Schnitzler, 2016). What this means is that a piece of infrastructure is only successful if it is actually used by its respective population for completing its role, otherwise it can fall into decay due to disinterest in maintaining unused systems. For the system in *Snowpiercer*, Wilford needed to continually convince the population of the eternity of the engine despite its breakdowns,

otherwise the occupants will look for an alternative. This is seen by Curtis's change in opinion when offered the chance to succeed Wilford, because early in the discussions between the characters, Curtis was tempted into taking on the role as he was tricked into believing, like capitalist realism, that any alternative to the current system would be suicide. But once the unethical innovations are revealed to Curtis, the true intention within the system of maintaining the status quo became visible through the infrastructural inversion. At this point Curtis is convinced that the system is broken beyond ethical repair, instead choosing Namgoong's option outside of merely recreating the same power relations. This resulted in Curtis innovating the entire infrastructure in the form of starting anew by inadvertently destroying the train after Curtis allows Namgoong to blow open the door on the side of the train. The explosion created a shockwave that caused an avalanche that derailed the train. After the avalanche all occupants, bar two children, died. As the sole survivors, they are left to roam the planet as the new Adam and Eve. Bong Joon-ho intended this as a "very hopeful ending" where "those two kids will spread the human race" (Abrams, 2014). The hopefulness of this ending is shown through the return to life on the planet in form of a polar bear seen in the distance as the children emerge from the wreckage of the destroyed train, and step into the new Eden. The ending of *Snowpiercer* demonstrates the uncritical dystopian perspective that this system cannot be saved by a "heightened consciousness of the impending dangers" (Jameson, 2005: 198), as seen by Curtis's choice in destroying the system. Instead, in order to have any hope of a utopian future, these hierarchies need to be completely broken. This shows a contrasting opinion of infrastructural power relations to *Fury Road*, in which there is the possibility of changing the systems internally. Instead, *Snowpiercer* shows that the only way to fix its example of a broken system is to destroy the whole infrastructure and start anew and in doing so disproves the myths of the eternity of the engine, the "need" for the population to abide by the trains hierarchy system, and of capitalist realism itself by providing an alternative that does not result in the complete suicide of society.

Dredd

Networks, Skyscrapers, and the Law of the Land

“Inhabitants of Peach Trees, this is Judge Dredd. In case you people have forgotten, this block operates under the same rules as the rest of the city. Ma-Ma is not the Law. I am the Law.”

Judge Dredd – *Dredd* (Pete Travis – 2012)

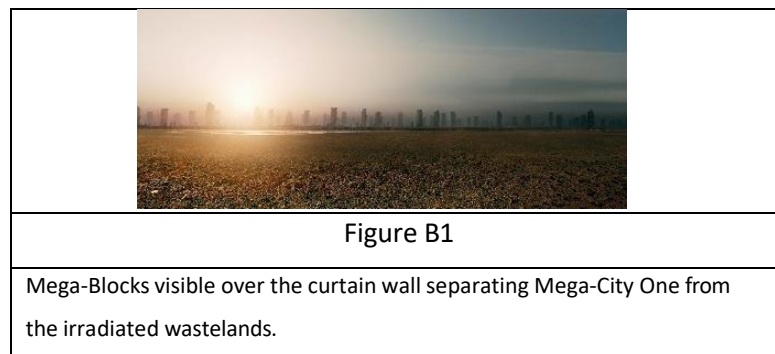
Pete Travis’s 2012 dystopian SF film, *Dredd*, tells a story of the conflict between systems of power within a post-war future. Following the setting established by the comic books in the *2000 AD* series (currently published by Rebellion Developments), *Dredd* takes place in the walled-in city that stretches from Boston to Washington DC called “Mega-City One.” Within this city, futuristic apartment complexes called “Mega-Blocks” house the majority of the population and due to a failing totalitarian state, many have fallen into organized crime. The narrative of *Dredd* takes place within one of these blocks, called “Peach Trees,” in which the ultra-violent criminal syndicate called the “Ma-Ma Clan” has taken control, using it as a base of operation to manufacture and distribute the new drug called “Slo-Mo”. When Dredd (Karl Urban) is tasked to take trainee Anderson (Olivia Thirlby) on assignment they respond to a call which results in them being trapped within Peach Trees, fighting against the full might of the Ma-Ma Clan. Throughout the conflict, collateral damage on the civilian population is devastating as the Clan are willing to kill anyone who gets between them and the Judges. This battle demonstrates the contrasting systems of power at play within Mega-City One, as each fights to maintain control of the land they claim to be their own: the Judges enforce the “law” over Mega-City One, while Ma-Ma (Lena Headey) as head of her Clan fights for control of Peach Trees. Within this conflict, the role of infrastructure within Mega-City One becomes central to each system’s claim to power.

In this chapter, I analyse how the different forms of infrastructure within Mega-City One enable their respective controllers to dominate the societies within their domain. First, I establish the world in which *Dredd* is located, looking at the comparison between the inside and outside of the city walls. Following this is an analysis of the two distinct types of infrastructure in the film: the networked city and the skyscraper. After comparing these two infrastructure types, an analysis of the conflicting styles of governance that contrasts the two styles is undertaken, looking at the militarism totalitarian state of Mega-City One and the neo-feudalistic society within Peach Trees. Finally, I examine the ending of the film, and question whether the conflict between the systems benefited the overall society.

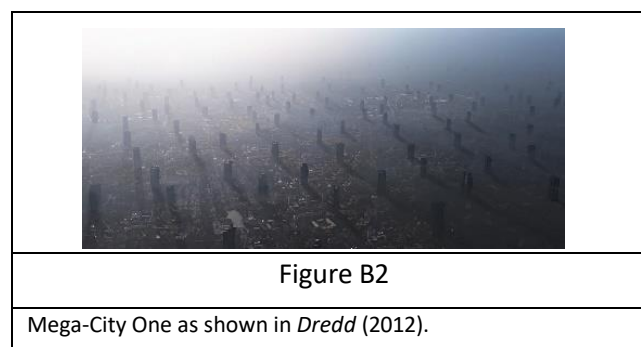
The World of *Dredd*: Inside vs Outside

The remnants of the world in *Dredd* are confined within the walls of Mega-City One. Similar to the circumstances set up in *Snowpiercer*, Mega-City One is also dictated by the contrast of the “inside” versus the “outside.” In both contexts inside the walls (or carriages in *Snowpiercer*) represents life and order, while the outside represents chaos and death. Where *Snowpiercer* had the frozen tundras as the remnants of the Earth, *Dredd* has irradiated wastelands.

The wastelands in *Dredd* are introduced in the opening sequence of the film. In these opening shots, we see what Dredd’s homodiegetic voiceover describes as the “cursed earth” as nothing can grow or survive there, and life is only possible within the walls.²¹ This desert is shown through a wide shot with the horizon spanning across the centre of the frame and the walls of Mega-City One reaching up towards the sky with the Mega Blocks reaching even higher behind the walls (Figure B1).



The overall state of life within Mega-City One is also provided by Dredd’s narration as he claims that “eight-hundred million people [are] living in the ruin of the old world and the mega-structures of the new one.” Within this new landscape, Mega-Blocks, single standalone skyscraper structures, consume much of the skyline. The film’s opening scene uses wide establishing shots to show the immense size of the city that is meant to stretch from Boston to Washington DC (Figure B2).



²¹ Homodiegetic narration is when a character acts as both narrator and protagonist, resulting in an effect where the audience gets the impression the character is talking directly to them (Kozloff, 1988:42).

These shots create a large cinematic space to show a greater area of the city, compared to the majority of the film being focused within a single Mega-Block. The opening scene also uses the narrative to build this extensive cinematic space by having a high-speed pursuit through the city as Dredd chases criminals across the wide Mega-Highways. The purpose in building this grand cinematic space is to establish the concept of the size of the Mega-City One and specifically how the Judges, while few in number, have an immense space to patrol. This also helps establish how the Mega-Blocks can easily fall prey to crime as they are rarely patrolled by Judges who already have too much area to try and police. By keeping the narrative on the street-level, *Dredd* withholds knowledge of the upper-classes within the city, neglecting to afford any screen-time to wealthy classes, and reducing the control of the Hall of Justice (the centre of the ruling council) to a mere surveillance centre, providing information to Dredd while he pursues criminals. By withholding this footage, the film helps build the more dystopian narrative in *Dredd* where the world is devoid of luxuries and where the only form of law and order is in the workings of the street Judges. This builds the mythos of Dredd as a veteran street-cop, not interested in higher workings beyond his work on the street-level.

Mega-City One vs Peach Trees: City vs Structure

Mega-City One was designed to look like a stagnated society; the film's producer and screenwriter Alex Garland wanted the city to feel connected to the real world, as if it was an imminent future, where audiences could relate to the experience of living in the city's urban blocks.²² Simon Orpana supports this idea by arguing that the Mega-Blocks link to the modern world as seen by the ghettos in cities in India, Mexico and Brazil (2014: 302). To make the sets look realistic, Johannesburg was used as a template for its already noticeable grid structure with only minimal additions made via CGI, such as the addition of an old tower block from London's South Bank (Appleyard, 2012). The Mega-Blocks themselves are heavily influenced by the real Ponte City tower apartment block in Johannesburg, Africa's tallest apartment building. The building has appeared in other dystopian films, including two Neill Blomkamp films, *District 9* (2009) and *Chappie* (2015), as well as in *Resident Evil: The Final Chapter* (Anderson, 2015), owing to its unique architectural feature of all apartments facing into the "eerie" gaping open core. The building's history also impacts the imagery of the block as it morphed "into an outsized symbol of the violence and decay that gripped parts of Johannesburg during South Africa's messy transition to democracy in the 1990s" (Brown, 2017). By using real cityscapes and buildings, Mega-City One's visuals are grounded in the real world, creating the gritty realism the production team wanted. These real-world counterparts also establish within

²² See "Days of Chaos: The visual effects of Dredd" featurette.

Dredd the two distinct styles of infrastructure that are in conflict within the narrative: the networked city and the structural skyscrapers.

The infrastructure of Mega-City One parallels a modern megalopolis society, “a network made up of intersecting networks [that] dissects and connects the city” (Kittler, 1996: 718). This means that a megalopolis is separated into smaller networks that overlap each other due to their mutual reliance, such as a network of roads requiring maintenance networks (workers, supplies to fix breakdowns and traffic networks to maintain order). These networks dictate essential elements of a society such as transmitting information and energy as well as laying the groundwork for graphing landscapes such as a network of rivers, channels and roads (Kittler, 1996: 718). Within the context of a city, networks of movement, goods, and energy overlap seamlessly with physical infrastructures. Brian Larkin argues that these physical infrastructures are shaped by the nature of their speed, direction, temporalities and vulnerability to breakdown (2013: 328). These physical infrastructures can be highways, power stations, piping, housing and shopping centres, which all act as hubs for the exchange of different societal flows. As cities become the centres for the expansion and utilization of overlapping network infrastructures, they increase their physical and cultural power, which according to Larkin, has “heightened the tempo of human intercourse and translated its products into forms that could be stored and reproduced” (2013: 712). The results of this are emerging within a modern society where theorists like Neil Brenner and Christian Schmid claim that “for the first time in human history, more than half the world’s population today purportedly lives within cities” (2014: 731) and others following up this claim arguing that by 2050 this proportion could grow to as much as two-thirds of the world’s population (Acuto & Rayner, 2016: 1147). With this in mind, it is not inconceivable that in a future like that shown in *Dredd*, with no livable world outside Mega-City One, that 800 million people could live within a city that spans from Boston to Washington DC. Within this city we also see the networks that shape the city into a grid separated into sectors and districts as noted by Ma-Ma originating from the “S9 Pleasure District” and Peach Trees having the highest crime rate in “Sector 13”. This shows that within each district they fulfil a single purpose, such as a “pleasure district” which demonstrates how the city is highly organized.

In the origins of infrastructural theory, Armand Mattelart argues that a world in movement, such as one of interconnected networks, would create a world open to change and progress through the circulation of goods, ideas and people (1996, 2000 cited in Larkin, 2013: 332). Larkin expands on this notion by claiming that history has the belief that “by promoting circulation, infrastructures bring about change, and through change they enact progress, and through progress we gain freedom” (2013: 332). However, this utopian hope for infrastructures is not a definitive outcome, as Mega-City One encompasses the characteristics needed for a dystopia to flourish. These

characteristics are high levels of unemployment, poverty, inadequate housing and health care, and extreme racial and minority violence.

Within the world of *Dredd*, Mega-City One acts as a character itself, which has been the desired effect within the series originating in the film's comic book origins.²³ This notion of giving sentience to infrastructure is echoed by Mike Davis who in describing the new Los Angeles office towers says they "include panopticon vision, smell, sensitivity to temperature and humidity, motion detection, and, in a few cases, hearing" (1993: 368, quoted in McNeill, 2005: 47). For example, surveillance systems give them "eyes", sensors such as smoke detectors give them a "nose", the metal support beams contract and expand to heat which gives them temperature sensitivity, and alarm systems give them motion and noise detections. This means that infrastructures become capable of action and reaction. Mega-City One's sentience is provided through narration by Dredd who describes the city as an organic creature that is "convulsing, choking, breaking under its own weight. Citizens in fear of the street, the gun, the gang", while a montage of gang warfare on the streets is shown, with some shown as newscasts. This feature, along with the visuals of the realistic cityscape, play into the cognitive estrangement in the film of portraying this world as a sort of "factual" future despite being SF cinema. This is further supported by *Dredd*'s modern technology that is relevant to the film's date of production such as wired headphones, modern cars and trucks, and modern fashion choices for civilians, compared to more traditional SF films like *Star Wars: A New Hope* (George Lucas, 1977) or *The Fifth Element* (Luc Besson, 1997).

Within Mega-City One, a significant proportion of the population lives in the Mega-Blocks that are scattered across the city (Figure B2). These Mega-Blocks are skyscraper apartment blocks that have all the facilities to function as standalone cities with shopping precincts and medical facilities all located within. While I have noted the real-world inspiration for Peach Trees, theory on skyscrapers also allows for further analysis into the infrastructural inversion evident within the structure; while the skyscraper "romanticizes power and the urban condition" (Huxtable, 1984: 11), Peach Trees remains distinctly dystopian.

Historically, high-rise construction developed mostly due to issues involving the horizontal growth of cities. Other factors for the emergence of high-rises include urban expansion destroying natural habitats or encroaching on industrial zones that were previously on the fringe of the city; irrationally used city space creating transport and social problems; and the cost of land increasing as cities became the centres of social, economic, political and cultural life (Akristiniy & Boriskina, 2018: 3). Alongside technological developments in material engineering (such as improved glass and steel) and construction solutions (such as elevators and metal frames), engineers and architects came to

²³ See "35 Years of Judge Dredd" featurette.

construct taller buildings that aimed to resolve the issues associated with cities with high rates of population growth, especially where horizontal expansion could not offer a solution (Akristiniy & Boriskina, 2018: 2-3). With new skyscrapers taking up more space in cities where horizontal expansion is not sustainable, like Singapore and Shanghai, the next step in development is the creation of what are called “vertical cities” where new skyscrapers and skyscraper clusters provide internally all the facilities needed to sustain a society so the population can spend the vast majority of their time within these complexes (Akristiniy & Boriskina, 2018: 3, 9-10). One such conceptual project is the Xtopia Concept Project in Shanghai (Figure B3) which is designed to be 300 stories, reaching over 1,600 meters high, it will contain 200,000 permanent residents and another 50,000 temporarily, and is planned to create agrarian, industrial, residential, and commercial zones within the one building (Akristiniy & Boriskina, 2018: 9-10).





Donald McNeill in his analysis of skyscrapers notes that many theorists argue that “skyscrapers are indissociable from the capitalist system, the ‘faceless’ corporation, or the abstract flows of capital that undermine place” (2005: 45-46) and as such, they play a distinct role in the “representational strategies of financial and political elites” and become “material element[s] in power-laden discourse” (2005:46-47). McNeill also notes that the agenda of a skyscraper’s owner are evident by the factors of the skyscraper’s creation and functioning, and the “human interactions that do and do not take place within, among, and around them” (2005: 48).


These capitalistic operations of skyscrapers can be understood by what Jodi Dean argues is the new-feudalistic tendencies of modern capitalism (2020) as the structures become central pieces of infrastructure in the accumulation of capital. Dean states that in the past decade neo-feudalism has “emerged to name tendencies associated with extreme inequality, generalized precarity, monopoly power, and changes at the level of the state” (2020). The term describes a new socioeconomic structure that creates a new class of lords and peasants by the exploitation of labour for commercial interests that combines with the new lords’ political agendas as hinterlandization (the division between what is secure and prosperous compared to what is at risk and desperate) becomes more evident (Dean, 2020). Within a modern context, the most notable example are

technology companies that have “become ever richer and more extractive, turning their owners into billionaires on the basis of the cheap labour of their workers, the free labour of their users, and the tax breaks bestowed on them by cities desperate to attract jobs” (Dean, 2020). Within *Dredd*, Ma-Ma utilises Peach Trees to similar ends by turning the skyscraper into a commercial base for the manufacture and sale of the drug Slo-Mo (a point to which I return below).





In the same way that early considerations of infrastructure saw in it the potential for utopian outcomes through progress, the notion of vertical cities as a solution to horizontal growth issues might also appear utopian. However, Vera Akristiniy and Yulia Boriskina argue that skyscrapers may take a dystopian turn as “the concept of vertical cities will no longer seem utopian” as cities grow at a rapid pace and that “in the near future the population will be able to spend almost the entire year in the structure of vertical cities, leaving them only for a trip outside the city or travelling to another country” (2018: 10). It is within this dystopian turn that Peach Trees finds itself situated, being created alongside the modern notions of skyscrapers as “mixed-use development,” with commercial and residential zones shared within a single structure (McNeill, 2005: 42). Within Peach Trees, this has resulted in the contained population spending the majority of their time within the complex due to the internal availability of all required amenities. Alongside the residential levels, Peach Trees also contains a shopping precinct on the lower levels, a medical facility, and for the Ma-Ma clan, it is also the base for manufacturing the drug Slo-Mo for commercial sale across the city. The dystopian nature of the block is further reinforced by the internal social collapse as Peach Trees has fallen to the control of the Ma-Ma Clan who treat the civilians as expendable in reaching their goals. This is encompassed in Anderson’s assessment of the block upon her and Dredd’s entrance to Peach Trees, stating “it has the highest crime rates in Sector 13. Unemployment rate of 96% and more than half the residential levels are classed as slums”.

Because *Dredd* is for the most part set within Peach Trees, the functioning of the block is explored in a lot more depth than the wider city. We see commercial zones at the lower level, residential zones in the levels above, and even a school zone in the form of a rundown classroom. These factors demonstrate how Peach Trees is central to the flows of the society living within the block. The residential areas are shown as dark narrow hallways, where the architecture is focused on symmetry and simplicity such as the bland, near-identical design seen on multiple levels (Figure B4). This creates a claustrophobic maze-type setting, which contrasts with the larger cinematic space created in the wider shots of Mega-City One. The claustrophobia is enhanced in the film’s cinematography, shown through tight framing such as Dredd looking through gaps in the wall (Figure B5) or when the camera uses half-covered shots, to create the effect of the audience peering around corners, “hiding” from the violence (Figure B6).

	
<p>Figure B4</p>	<p>Figure B5</p>
<p>Side shot of multiple levels of Peach Trees demonstrating the simple symmetrical design used throughout the block.</p>	<p>Tight framing of Dredd looking through a gap in the wall, about to ambush a group of Clan members.</p>


<p>Figure B6</p>
<p>Half the shot is covered and panned slowly to the left creates the effect of the audience slowly appearing from hiding to peak around the corner.</p>

Additionally, facial close-ups of characters allow focus to be placed on their expressions to heighten the emotions, such as Anderson's fear during the events of the film (Figure B7 and B8). The intended effect of this is to reproduce the same claustrophobic-anxiety in the viewer (Orpana, 2014: 303). To contrast the typically more grey-scale colours of the Block's environment, highly stylised slow-motion violence acts as a type of cinematic catharsis, as these scenes use bright colours and focus on small details, such as during the first drug bust, there is a focus on the impact of the bullets, as glistening, almost crystal-like blood splatters draw focus away from the violent killings (Figure B9 and B10). The effect of this is to build the "slum" aesthetic of the block which is highlighted by the multiple drug dens that the film's conflict moves between.

	
<p>Figure B7</p>	<p>Figure B8</p>
<p>Close-up of Anderson's face to show her fear during the first drug bust. Meanwhile, Dredd is shown as emotionless.</p>	<p>Close-up of Anderson's reaction after fighting the first wave of attackers.</p>
	
<p>Figure B9</p>	<p>Figure B10</p>
<p>During the breach into the drug den, the slow-motion footage uses bright colours to contrast the typical greyer-scale.</p>	<p>During the breach, blood effects are not used for gore purposes but as visual catharsis</p>

Law of the Land: The Military Totalitarian State vs Neo-Feudalism

The society in *Dredd* is in conflict between the political systems that govern the two types of infrastructures within Mega-City One. The wider city is governed as a military totalitarian state in which the Judges' exercise extreme levels of control over society and citizens' liberties. In contrast, Peach Trees has become a neo-feudalistic society with Ma-Ma and her personal army installed as rulers after they monopolised power within the block. Within each system, the strategies of the respective rulers vary: the dominance of Mega-City One is about societal control, while the dominance of Peach Trees is about commercial monopolisation.

The Judges in *Dredd* act as a paramilitary force to enforce a military totalitarian state, albeit a failing one. For the purpose of this analysis, a military totalitarian state combines elements of militarism and totalitarianism into a single form of government. In military regimes "military officers are major or predominant political actors by virtue of their actual or threatened use of force" to control civilian leaders and the population (Hadnius & Teorell, 2007: 146). In domestic systems based on militarism, civil-military relations become important where economic, governmental and

military parties work in tandem (Stavrianakis, 2015: 492). This results in “the penetration of social relations in general by military relations” (Shaw, 1991: 9-15). When these elements are combined with totalitarian elements of the state having complete (or near-complete) control of the nation’s political systems, extreme “subordination of the individual to the state”, “a lack of respect for citizens’ rights, for the public accountability of political elites, and for the rule of law”, and its use of terror (Holmes, 2015: 448) a nation-state like the one demonstrated in *Dredd* appears.

Mega-City One has become an urban warzone as Judges clash with resistance groups in the form of criminal gangs. As the streets become battlefields, a parallel can be drawn with Stephen Graham’s observations from modern society as he argues “urban areas are now the ‘lightning conductors’ for the world’s political violence. Warfare, like everything else, is being urbanised” (2004:4). This is a trend that Barbara Mennel argues started during the Second World War and now greatly impacts citizenry (Mennel, 2008). However, the form of warfare in *Dredd* is not between rival nations but is in the conflict between rival gangs and the Judges. This results in a crime rate that is quickly outmatching the Judges’ response rate. This is noted by Dredd to Anderson when he states there are “twelve serious crimes reported every minute. Seventeen thousand per day. We can respond to around six per cent”. Through this exposition, we can understand two contrasting factors: why the Judges believe they need to enforce the militaristic totalitarian state; and why they are failing to enforce said state. As a result of these factors, Judges have come to be described by themselves as the only force holding the city together, where they enact the will of the law with ruthlessness as their role becomes judge, jury, and executioner, bypassing any semblance of a modern court system. This is due to the nature of policing an expansive networked city with an inadequate force to quell the growing issues of the overcrowded horizontal city. Narratively, this is explained through exposition provided during Dredd’s introduction to Anderson when he is informed that the reason she was allowed to undertake a trial (despite having a failing grade in training) was because she has psychic abilities due to radiation from living near the boundary wall. The Chief Judge tells Dredd “the Judges are losing the war for the city. We believe she could be a major asset,” acknowledging the Judge’s need to innovate in order to maintain their rule.

According to Kittler, weapons of destruction adapt to the infrastructure they are attacking (1996: 727), and within the world of *Dredd*, the Judges become the medium for applying their technologically advanced weaponry within the infrastructure of the networked city that is Mega-City One. Such advanced weaponry includes vehicles like AI assisted patrol bikes and drones, and weaponry like a Judge’s standard pistol that is able to cycle through multiple forms of ammunition. This results in another element of militarism where the accounting of military forces and equipment becomes the basis for analysing the balance of power, such as a military arms race (Stavrianakis,

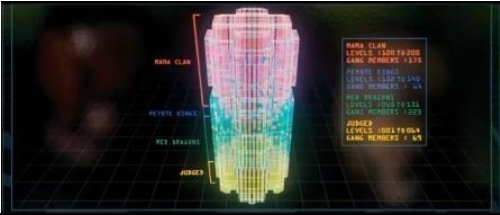
2015: 491). Within *Dredd* the balance of power between the street-gangs and the Judges is mixed: the street gangs use modern conventional weaponry but have superior personnel numbers (although they are separated into multiple factions), while the Judges through technological dominance use more advanced weaponry, armour and medical kits but are heavily restricted by the low number of Judges. The technological advances of the Judges are explored during the scene when Dredd has to fight corrupt Judges that Ma-Ma pays to kill him in the Slo-Mo factory. During this scene we see Dredd voice control his pistol to cycle through different types of ammunition including high-explosive, rapid-fire and armour piercing rounds. Additionally, after Dredd is shot with an armour piercing round, he uses an advanced, pouch-sized medical kit to seal the wound instantly and return to being combat-ready. These elements act as novum within the film, used not only to propel the world of the film into a futuristic setting, but also to contrast with the technological level of the rest of Mega-City One's population, as the Ma-Ma clan are shown in regular clothing using more conventional weaponry. The purpose in examining the struggle over the balance of power is to demonstrate that within Mega-City One the totalitarian Government is unable to enforce control through technological dominance alone as the greater numbers of the street-gangs spread resources too thin allowing corruption and dissent to spread through the society.

Totalitarianism is sometimes seen as a distorted view of advanced modernity due to the technological means for extreme levels of population control not existing until the twenty-first century (Holmes, 2015: 450). Interestingly, this notion of modernity is contrasted to militarism where it is often believed to be a system that is "a throwback to a more violent past, one that will be exorcised through progress and development" (Stavrianakis, 2015: 493). However, similar to *Snowpiercer*, violent systems have not been imagined to be "exorcised through progress," but rather are dependent on the agendas of the ruling classes. Similarly again to *Snowpiercer*, opposition to totalitarian systems depends on the wider socio-economic and political characteristics (Stavrianakis, 2015:494). While in *Snowpiercer* that resistance was a unified organised rebellion, in *Dredd* it is gang lords seizing pieces of land for personal use.

SF cinema has a long history of depicting totalitarian societies, from Fritz Lang's *Metropolis* (1927) to the previous examples of *Snowpiercer* and *Mad Max: Fury Road*. In each example, there is a form of resistance to this rule where stereotypically these resistances are based on western ideals of liberty and democracy. Other resistance movements based on these ideals include the Rebel Alliance from *Star Wars: A New Hope* (Lucas, 1977), the libertarian underclass in *Demolition Man* (Marco Brambilla, 1993) or the titular character from *V for Vendetta* (James McTeigue, 2005). Within *Dredd*, the resistance comes in the form of the Ma-Ma clan and the neo-feudalistic society that has

been created within Peach Trees as it is turned into a state of dissent, with the Judges' law suspended as complete sovereignty falls to Ma-Ma's control. This sovereignty is afforded to Ma-Ma by establishing herself as the clan's Matriarch, and therefore she is in control of clan members and civilians alike within Peach Trees. Her position is further supported by the notion that the block rarely feels the presence of the Judges as the paramedic working in the block informs Dredd and Anderson upon their arrival. The paramedic also provides context on *how* Ma-Ma took control, as she took over her pimp's business interests after killing him and then through violence eliminated her opponents and now controls all two-hundred levels. This monopolisation of the block allowed her to manufacture and distribute Slo-Mo without resistance (until the Judges' arrival), allowing her to accumulate enough capital to be able to hire corrupt Judges to hunt one of their own.

Ma-Ma's operations within Peach Trees can be described as neo-feudalistic in nature as she enforces a system engulfed by extreme inequality, generalised uncertainty, changes to governance within the block and monopolisation of power. Ma-Ma's monopolisation is seen in two ways. First, it can be observed in the control of the block where Ma-Ma eliminated her competition by systematically killing her rivals within Peach Trees, resulting in her complete control of the entire block using her personal army of over four hundred clan members (Figure B11 and B12).

	
<p>Figure B11</p>	<p>Figure B12</p>
<p>The gang distribution in Peach Trees before Ma-Ma's monopolisation. Includes the number of gang members.</p>	<p>The gang distribution in Peach Trees after Ma-Ma's monopolisation. Includes the number of gang members</p>

The second form of monopolisation is through commercial domination of the drug Slo-Mo where any attempt to challenge her control is met with grotesque violence. This is seen when three criminals were caught trying to sell drugs within her dominion as she skinned them alive then dropped their bodies from the penthouse. Ma-Ma's monopolisation of Slo-Mo creates a valorisation process whereby the unstable nature of its control results in the increased dependence on surveillance, coercion and violence within the block to maintain control. These features have also been noted to be aspects of neo-feudalism (Dean, 2020). Through these two monopolised factors within Peach Trees, Ma-Ma enforces her neo-feudalistic control over Peach Trees where her commercial interests in the manufacture and sale of Slo-Mo combines with the way she governs the block.

Dredd: Hero or Villain?

The conflict between the two systems of control comes to a head at the end of the film when Dredd defeats Ma-Ma and throws her off the top of Peach Trees. While at first glance this appears as a happy ending with the “villain” Ma-Ma defeated, upon evaluation from a power-relations perspective, very little is actually achieved beyond destroying a drug factory and removing the clan’s figurehead (of the four-hundred clan members, Dredd kills only around fifty). After Ma-Ma’s demise, Dredd simply leaves the block as clean-up crews arrive, moving on to his next assignment, merely responding to only one of the seventeen thousand serious crime calls that are reported each day. This ending not only establishes the narrative as a type of “day-in-the-life” story, but also the paradoxical nature of Judge Dredd. The film references Dredd’s belief in the system, such as his opening narration stating that there is “only one thing fighting for order in the chaos, the men and women of the Hall of Justice”, or the occasions where he chooses mercy over murder such as the case of two youths who try to ambush Dredd where he stuns them instead of killing them. However, in contrast, Dredd’s actions show a more nihilistic side such as his constant sarcasm towards Anderson’s hopefulness. For example, upon their entry to Peach Trees, when Dredd sarcastically replies to Anderson wanting to be a Judge to save people she replies “I was born and raised in a block like this, before the Justice Department took me in. I know there are good people inside. Good families just trying to get by. Yes, I believe I can make a difference”, to which Dredd only replies with a sarcastic shake of his head and simply replying “admirable”. This type of dialogue, along with his emotionless response to his violent situation create the impression of a character simply going through the motions of his day-to-day, going as far to completely underplay the events of the film to the Chief Judge at the end, calling the events just a “drug bust” with “uncooperative” perpetrators.²⁴

Throughout the film, Dredd tries to embody the ideology of the Judges, going as far as to call himself “the Law” but his paradoxical nature of both believing in the law while acting dismissive and sarcastic to Anderson who believes she can make a difference, reflects on the overall dystopia of the film. His nihilistic side lines up with the uncritical dystopian view of Mega-City One where it is believed the system is so corrupt that it’s unsalvageable, where all Dredd has done is changed the balance of power within a single Mega-Block, ultimately changing none of the wider city’s issues. His more idealistic side believes that his actions have meaning, as seen through his repulsion towards the treasonous Judges who have become disillusioned by the system, and in his habit of showing mercy towards youths and women. However, despite glimpses of potential routes for a utopian world, the ending of *Dredd* is much more nihilistic than the previous examples of *Fury Road* and *Snowpiercer*. While the previous examples are more direct in demonstrating how change is possible

²⁴ The work of Antonio Gramsci (1971) helps us consider ethics and morality within the context of *Dredd*. The titular character is another problem in the world of the film, offering a pathway to analyse the character; not as the hero with whom the audience sides, but rather as a type of villain within the cinematic world.

within dystopias, *Dredd*'s world is shown as a system that is "too big" to change, such as the Judges' ineffectiveness in policing the whole city. Through the narrative of *Dredd*, we see that this results in minor factions, like the Ma-Ma clan, arising within the under-monitored areas, like Peach Trees.

In *Dredd* we see that domination of the infrastructures within Mega-City One enables a ruler to create and enforce power-relations within the networks they dominate. These networks can be as large as the system of Mega-Highways that intersects the city, or as small as a single factory producing a monopolised product such as Slo-Mo. By dominating these systems, rulers can dictate terms to the civilians who use these networks, as long as the ruler can maintain control over the infrastructures: Ma-Ma had her rule taken away from her by a Judge, while the Judges' control is failing due to being unable to maintain control of all of Mega-City One's infrastructures.

Conclusion

The key aim of this thesis was to create, contextualize and apply a new perspective to view power relations in post-apocalyptic cinema, using SF theories such as cognitive estrangement, alongside infrastructural theories. Through this, I have argued that infrastructural theories, when applied in this context, reveal how structures and networks can dictate societal flows, and how by controlling them, a ruler can manipulate how the population interacts with these infrastructures. This new perspective provides the framework for further research into SF worlds to examine how narratively these worlds' function, are maintained and subsequently dominated by a ruling class.

To explain the modern world, theories relevant to current or past societies are applied. Such recent theories include infrastructural inversion that aims to make visible the previously invisible infrastructures so they can become a medium for analysis of the how and why infrastructures can dominate the flows of society. My new perspective of infrastructural analysis applies these same theories to cinematic examples so that the infrastructures essential to the narrative worlds can equally become a place for analysis of that world's power relations. In each of my film chapters, I applied a different infrastructural theory to the cinematic world's unique infrastructural circumstances to analyse and reveal how power relations are imagined in the post-apocalypse. For *Fury Road*, Brian Larkin's theory of societal flows revealed how the fortress of the Citadel is the essential element needing to be dominated in order to control the wastelands. In the chapter on *Snowpiercer*, theories on infrastructural breakdown were applied to reveal the "eternal" engine was a façade needing to be maintained to continue a balanced life on the train. My analysis of *Dredd* used theories on networks and vertical cities to analyse the power struggle within Mega-City One, as a neo-feudalistic society conflicts with the larger totalitarian state. Through these three examples, I demonstrated how modern infrastructural theories can be applied to a post-apocalyptic setting, regardless of how distinct the circumstances may be. In each example, these theories were able to reveal how these worlds operate, are maintained and are subsequently dominated.²⁵

Each film analysed in this thesis comes from a previously established narrative world: *Fury Road* is a continuation of the original *Mad Max* Trilogy, *Snowpiercer* is an adaption of a French graphic novel, and *Dredd* is an adaption of the character created in *2000 AD*. Two of the film

²⁵ In the *Fury Road* chapter, Larkin's theories allow for an analysis of the interaction of societal flows, such as through trade networks, which are maintained using a paramilitary force that enables the ruler to dictate terms to the surrounding society. In the *Snowpiercer* chapter, theories on closed ecosystems reveal how the train operates, while theories on infrastructural breakdowns revealed how the systems were innovated using humans for extinct parts, and how this system allows the train's conductor to maintain control over the internal population. In the *Dredd* chapter, network and skyscraper theories reveal how societal flows interact within the larger city, as well as isolated elements like the Mega-Blocks, and through this understanding, I analyse the two socio-political systems in conflict for control.

examples, *Fury Road* and *Snowpiercer*, spawned prequels that are either already released or are in development: *Furiosa* (George Miller) is currently set for a 2024 release, and *Snowpiercer* gave rise to a Netflix series that first aired in 2020. Beyond generating prequels, each film's conclusion provided an ambiguous ending that left many questions about the future of each society and how they will continue within either their changed or unchanged socio-political situations. These ambiguous endings and creation of prequel content demonstrates a continued interest in these films and their worlds, and a continued desire to explore their post-apocalyptic landscapes, providing new situations and environments for further analysis. These new films will provide a space for further research using my infrastructural perspective to examine further how these worlds operate and are dominated.

Another way forward for further research would be to use the perspective of infrastructural focus to expand on the analysis of SF as allegory for the modern world. Michael Truscello, who also provides readings of *Fury Road* and *Snowpiercer*, does this in part with his concept of "infrastructural brutalism" that he argues "provides the semio-material support for most systems of oppression under industrial capitalism. The "critical" infrastructure that sustains life in industrialized societies also generates necropolitical assemblages, death-dealing dispossession, and structural oppressions" (2020: 6-7).²⁶ This theory allows analysis of SF stories from the perspective of their real-world analogies, as is the case in Truscello's analysis of *Fury Road*, of which he writes that "we should consider the ways in which these films press at the boundaries of the contemporary political imaginary in a dying world that will not stop driving" (2020: 145). In regards to *Snowpiercer*, Truscello states that "its depiction of class struggle within a technofuture produced by capitalist logics resonates so comprehensively with actually existing capitalism" (2020: 220). By combining my infrastructural focused perspective with theories like infrastructural brutalism, it can be argued that SF cinema displays futures in a way that we may learn from our future mistakes to avoid the circumstances that led to these worlds coming to fruition. From this perspective, we can analyse the theoretical set of circumstances that lead to the creation of post-apocalyptic worlds. While for cinematic and commercial purposes the drama is drastically increased, these films do still provide opinions on the modern world about our resource consumption, post-capitalist society and environmental treatment, all of which are explored within the post-apocalyptic examples of this thesis.

²⁶ Semio-material practices are defined as "socially shared and individually effective sets of practices that guide the interpretation of and condition the forms of engagement with the built environment.... They provide conscious guidelines for or unconscious dispositions about how to draw inferences from the built environment, how to produce and change it, and how to engage it in social practice" (Bortoluci, 2020:300).

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