ABSTRACT

While the sublime is most often associated with the theories of Edmund Burke and Immanuel Kant in the eighteenth century, it has increasingly moved away from fine arts and become intertwined with developments in the advancement of technology. It is for this reason that science, and by extension science fiction, becomes an important element in the analysis of the sublime. Film and the cinema can be considered as two of the most prominent elements in translating, what may be termed, the 'science fiction sublime', hence it is the medium and setting chosen to illustrate this iteration of the sublime.

This study explores the histories of both the sublime and science fiction in order to show how they have impacted one another. The SF films discussed have been chosen from the past decade, as the bulk of the research into the genre is concentrated on particular older films like *2001: A Space Odyssey* (1968) and *Blade Runner* (1982). Jonathan Glazer's *Under the Skin* (2013), Joseph Kosinski's *Tron: Legacy* (2010) and Christopher Nolan's *Interstellar* (2014) are used as examples of how visual effects may evoke the science fiction sublime, as well as how the sublime is represented in the themes of alienation/the Alien Other, technophilia/technophobia and infinity along the space-time continuum respectively.

The study ultimately shows how the sublime is *evoked*, non-diegetically, through spectacular visual special effects and is *represented* diegetically, through the plot and themes of particular science fiction films. This is done through what is called "transcendence in immanence".

Title of dissertation: Close encounters of the sublime kind: a study of the science fiction sublime in contemporary film

Name of student: Andrea van Wyk
Supervisor: Professor Amanda du Preez
Department: Department of Visual Arts
Degree: Magister Artium (Visual Studies)

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CLOSE ENCOUNTERS OF THE SUBLIME KIND: A STUDY OF THE SCIENCE FICTION SUBLIME IN CONTEMPORARY FILM

By

ANDREA VAN WYK

Submitted in fulfilment of the requirements
for the degree Magister Artium (Visual Studies)
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CHAPTER ONE: INTRODUCTION

The sublime and science fiction[1] are two terms and concepts that may seem disparate and incongruent. The sublime is, after all, a deeply philosophical and aesthetic concept while science fiction is a genre of popular fiction in literature and film. But, as this study aims to demonstrate, the two intersect and influence each other in varied and meaningful ways.

In contemporary culture, the sublime has become an offhand term used commonly to describe anything from a new pop song to a gourmet dessert. Simon Morley (2010a:[sp]), in writing on the contemporary sublime, argues that the sublime experience is being contaminated because mass culture exploits it: "Sublime effects are routinely produced to sell anything from automobiles to men's after-shave. Indeed, the debased rhetoric of such consumerist pseudo-sublimity may often seem to place the sublime beyond the reach of authentic experience". Artist Julian Bell (2013:[sp]) appears to agree, suggesting it is a term that has perhaps been employed too heavily in art writing over the past two decades: "References to it have come from so many angles that it is in danger of losing any coherent meaning. We have been offered everything from 'the techno-sublime' and 'the eco-sublime' to 'the Gothic sublime' and 'the suburban sublime': anything from volcanoes and vitrines to still lives and soft toys may be sniffed at for sublimity".

The term 'sublime' and theories about it became prominent in the eighteenth and nineteenth century Europe, particularly in art and philosophy. It formed part of the Enlightenment and Age of Reason and was brought to prominence by the theorists Edmund Burke and Immanuel Kant during this time, although the term's origin can be traced to Greece between 1AD and 3AD. Artists and poets during Enlightenment used the concept of the sublime as inspiration. British painters like Joseph MW Turner, William Blake and James Ward, as well as poets including William Wordsworth and Samuel Taylor Coleridge, were recognised for taking inspiration from notions of the sublime in their depictions of nature. Indeed, Coleridge (quoted in Twitchell 1983:21, emphasis in original) wrote "I meet, I *find* the Beautiful – but I give, contribute or rather attribute the Sublime. No object of the Sense is sublime in itself; but only as far as I make it a symbol of some Idea. The circle is a beautiful figure in itself; it becomes sublime, when I contemplate eternity under that figure".

More than a hundred years after Burke's treatise, the notion of the sublime fell out of favour in philosophical circles. In 1886, philosopher Friedrich Nietzsche declared the sublime out of

[1] The genre is also commonly referred to in many texts as SF.

date (Nigel Llewellyn & Christine Riding 2013:[sp]). But, as industrialisation spread to the 'New World', particularly the United States, notions of the American and technological sublimes emerged. Jürgen Martschukat (2002:903) proposes that in the nineteenth century the concept of the sublime changed; instead of nature, "man-made creations and achievements became the major triggers of the sublime".

The re-emergence of the sublime was not necessarily popular. Llewellyn and Riding (2013:[sp]) write that those artists in the early and mid-twentieth century who continued to engage with ideas of the sublime were often "questioned, mocked or spurned. However, it remains possible to locate a distinctively modern sense of the sublime in the works of such artists as [Kazimir] Malevich, [Mark] Rothko, [Barnett] Newman and [Robert] Smithson".[2]

1.1 Rationale and need for study

However, the sublime has increasingly moved away from fine arts and become intertwined with developments in the advancement of technology. It is for this reason that science, and by extension science fiction, becomes an important element in the analysis of the sublime. Llewellyn and Riding (2013:[sp]) explain that contemporary artists have looked back to the early ideas on the sublime, combining it with aspects of modern society: "They have located the sublime in not only the vastness of nature as represented in modern science but also the awe-inspiring complexity and scale of the capitalist-industrial system and in technology."

The various types or iterations of the sublime can at times seem analogous and at other times antithetical to one another, making a study of the sublime complex and vast. This results in the question "what is the sublime?" which often raises more questions than answers. Guy Sircello (1993:549) asks whether a theory of the sublime is even possible, calling much of the discourse "gibberish" and "radically self-contradictory". Why then a study of the sublime? Aside from the relevance of the technological sublime and digital sublime to major developments in science and technology, art (in its various forms) still considers the sublime important. It is significant enough that the Tate Modern gallery created a vast project to discuss and debate the sublime in 2008; what it was 'then' and what it is 'now'. This has included exhibitions and art installations, conferences and the creation of an entire section on its website where artists and theorists have posted essays on the sublime, a project that is still running.

[2] Newman himself did much to revive and rewrite the concept in his 1948 essay, *The sublime is now*, in which he severely criticises European art for failing to achieve the sublime.

The sublime then appears to have resurfaced again. Cornelia Klinger (quoted in White & Pajaczkowksa 2009:238) proposes a reason for why the sublime recurs time and again, stating that a culture of the sublime "emerges at historical points where power is in transition, giving rise to the affirmation of possibilities generated by a subjectivity of *krisis*, change, and the cultural recognition of the value of affective interiority as a mean[s] to revolutionary change". Thus, the sublime emerges when culture and political developments are particularly in flux. The past two decades have seen radical shifts in global politics. The terror attacks of 9/11, the rise of Islamic fundamentalism, the Arab Spring (fuelled by social media), climate change, the global financial crisis, the redrawing of geopolitical boundaries,[3] and the exponential pace at which technology develops (from smartphones to 3D printing to bio-engineering to the planning of the first manned mission to Mars). These are just some of the phenomena that are causing instability,[4] and perhaps, "*krisis"*.[5]

Similarly, science fiction rose to prominence as a response to and was a critique of a period of massive change in history: The Industrial Revolution of the 1800s. This comes not long after Kant wrote *The critique of judgment* in 1790. The Industrial Revolution also overlaps with the emergence of the American and technological sublimes. While there were some precursors to science fiction as a literary genre before this (for example Greek mythology), it was the publication of Mary Shelley's 1818 novel *Frankenstein; or, The modern Prometheus* that has been widely credited as spawning the birth of this lucrative and popular genre in both literature and film. Indeed, US English Professor H Bruce Franklin (Science fiction… [sa]) states that science fiction is:

> an expression of only modern technological, scientific, industrial society, appearing when preindustrial societies are transformed by an industrial revolution. Indeed, industrial society creates not just the consciousness characteristic of science fiction but also the very means of physically propagating science fiction in its various cultural forms, even before it was beamed as images on movie and video screens.

By the end of the nineteenth century, SF was becoming well-established in popular fiction, so much so, that when film was invented on the eve of the dawn of the twentieth century, SF movies were some of the first to be made.

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[3] In 2011, South Sudan became the world's youngest nation, following decades of civil war in Sudan. The battle for secession has also been seen in recent events in the Ukraine, where in March 2014 Crimea voted for independence from Ukraine during a referendum, while in other parts of eastern Ukraine separatists battle to form part of Russia once again.

[4] In an article for *Huffington Post,* Guy Lidbetter (2012:[sp]), the Chief Technology Officer for *Atos Global Managed Services* writes that even though Generation Y (born after 1980) has long been the digitally native generation that has transformed traditional communication and media methods, the pace of technological development is moving so quickly that "they will be surpassed not by their children ('Hey dad, email is for 20th century losers') but by their siblings ('Hey brother, you still using that?')".

[5] A Greek word, often used in Biblical studies, meaning "judgment**;** i.e. opinion or decision given concerning anything, especially concerning justice and injustice, right and wrong" (Biblehub:[sp]).

1.2 Aim of the study

Despite the pervasiveness of science fiction in literature and film, it has been widely disregarded as anything of real import. The genre has been derided and disdained by critics, often seen as ‘low-brow’. Gomel (2009:9) studies the SF genre in literature as a part of postmodernism, claiming that while there is a definite link between the two, for many theorists, postmodernism is the primary focus of study and science fiction secondary, "as if SF were a poor relation brought in to 'pass' in the company of its betters, mainstream postmodern fictions". Brian McHale (quoted in Gomel 2009:11) states that "[w]e can think of science fiction as postmodernism's non-canonized or ‘low art’ double".

Notwithstanding the criticism, there are many who recognise the importance of science fiction. William Sims Bainbridge (1986:125) claims that "no variety of literature except science fiction wonders about the long-term future of the human species, and none suggests such a wide range of alternative fates". SF writer Robert A Heinlein (quoted in Bainbridge 1986:15, emphasis in original) asserts the genre is "the *only* branch of literature which even attempts to cope with the real problems of this fast and dangerous world. All other forms don't even try. In this complex world science, the scientific methods, and the consequences of the scientific method, are central to everything the human race is doing and to where we are going".

This study recognises both the import of the sublime as a philosophy and concept in contemporary times and of science fiction as a genre, as well as a link between the two. Clark Ashton Smith (in Bainbridge 1986:214-215, emphasis added) in 1932 already defended the importance of the science fiction genre, saying it helped readers to:

> transcend the limitations of human experience: ‘The real thrill comes from the description of ultrahuman events, forces and scenes, which properly dwarf the terrene actors to comparative insignificance. For many people... imaginative stories offer a welcome... release from the somewhat oppressive tyranny of the homocentric, and... present-day "humanism" and realistic literature with its unhealthy materialism and earth-bound trend. Science fiction, at its best, is akin to *sublime and exalted poetry* in its evocation of tremendous, non-anthropomorphic imageries’.

Hence, science fiction, whether in literature or film, forces readers and audiences to think about both the present and the future. It results in questions about possibilities, choices and consequences. It is about progression, digression and retrogression. As Franklin (Science fiction… [sa]) states: “Science fiction is the major non-realistic mode of imaginative creation of our epoch. It is the principal cultural way we locate ourselves imaginatively in time and space”. Journalist Jim Dalrymple II (2007:2) also links the sublime and science fiction, this

time in film, arguing that many characters in SF movies "encounter social, temporal, and psychological changes to their environments 'in comparison with which everything else is small'" and that these films are "marked not merely by semantic elements, but more importantly by an attempt to produce a state most accurately described as the 'sublime'".

Film and cinema[6] can be considered as two of the most prominent elements in translating, what may be termed, the 'science fiction sublime'. Pajaczkowksa (2009:242) affirms this link between science fiction and the sublime by arguing that "[t]he concept of the sublime brings to popular culture its capacity to consider affect, judgement and spectacle. The cinematic brings to the sublime the textual conventions that are specific to its generic forms" and "the worst and the best of contemporary public culture is [sic] structured by the cinematic sublime". This highlights the importance of cinema as a vehicle for the sublime.

The objectives of the study include brief histories of the origins and developments of both science fiction and the sublime. This is done in order to show how the genre of science fiction and the various branches of the philosophy of the sublime intersect and become inextricably linked. Examples in visual culture, specifically film, will be discussed to show how SF and the sublime converge. Film has been chosen because of its relation to the 'cinematic sublime'. Vivian Sobchack (2008:196) explains that the cinematic sublime is experienced when viewers become more than just disembodied readers of film. She explains that

> [m]ovies touch us and we feel and touch (and sometimes even taste and smell) them back – and this not merely metaphorically. That is, they make sense to and for us not only textually but also texturally. They affect our proprioception and bodily rhythms, arouse or sicken us, make us flinch, gasp, cry, laugh, hold our breath. Indeed, the very intelligibility and meaningfulness of the cinema not only emerge from but also depend upon our ontological (and ontic) existence as 'cinesthetic subjects'.

The research on how the sublime is present in science fiction film and which iterations of the sublime are evoked appear limited compared to other analyses of both the sublime and of SF. This study aims to show how various expressions or forms of the sublime can be evoked in science fiction film, non-diegetically through special effects, while the sublime may be represented in science fiction film, diegetically through the plot and themes. In other words, the aim is to show how science fiction is able "to *create* the boundless and infinite stuff of sublime experience, and thus to produce a sense of transcendence beyond human finitude" (Scott Bukatman 1995:267, emphasis in original).

[6] Although the terms "film" and "cinema" are often used interchangeably, for the purpose of the study "film" refers to movies themselves and "cinema" to the space in which films are watched i.e. in the dark, on a massive screen.

This study concerns itself specifically with exploring the science fiction sublime in films from the past decade. This is because research into science fiction films is often about movies from several decades ago as becomes evident from *The Guardian* and *Observer* (Top 10 sci-fi movies: 2013) film critics' top-rated science fiction films: *2001: A Space Odyssey* (Stanley Kubrick 1968), *Metropolis* (Fritz Lang 1927*), Blade Runner* (Ridley Scott 1982), *Alien* (Ridley Scott 1979) and *The Wizard of Oz* (Victor Fleming et al 1939). The *Hollywood Reporter* (Couch: 2013) also has *2001, Alien* and *Blade Runner* in the top five of its list of *30 Groundbreaking Sci-Fi Films*. Furthermore, Kuhn (1999:1) reveals that *Blade Runner* was the most researched film in fiction studies courses at North American universities in 1997, followed by *2001*, *Metropolis*, the *Alien* series and *The Day the Earth Stood Still* (Robert Wise 1951).

What this shows is that the study of the genre appears to be mostly concerned with older, so-called 'classic' science fiction films. In order to show the ways in which the sublime is present in science fiction in contemporary culture, more recent films are considered as case studies. This means this study may add to the canon of research into science fiction movies, because of the lack of in-depth analysis of recent films of this genre. Moreover, the study could then give philosophical and theoretical insight into a particular landscape of popular visual culture.

Three science fiction films are highlighted to show how the sublime is evoked through the genre's special effects, as well as how the sublime is represented through themes like alienation/the alien other, technophilia/technophobia and the space-time continuum. Jonathan Glazer's 2013 film, *Under the Skin* is discussed as an example of the first theme, Joseph Kosinski's *Tron: Legacy* (2010) is explored as a representation of the second theme, while Christopher Nolan's 2014 film, *Interstellar* is discussed as an example of the third.

1.3 Literature study

The research topic has been produced by interlocking two separate areas of study namely the science fiction genre and the sublime, with the latter being tailored specifically into a discussion of SF film/cinema. Thus, the research is interdisciplinary and cannot depend on only a few literature sources. The study, and by extension the research texts, involves philosophy, history, visual studies (particularly film study), cultural (and socio-cultural) studies and English literature. Because of this, the majority of texts used are located in academic journals or as essays within books. However, there are some books that are useful on their own as background for this study.

Primary sources include Edmund Burke's treatise *Philosophical enquiry into the origin of our ideas of the sublime and beautiful* (1757) and Immanuel Kant's *Analytic of the sublime* (1790). Many of the other texts and articles on the sublime, especially those dealing with science fiction and cinema, are based on these two seminal works. In addition, essays including Scott Bukatman's *Artificial infinite: on special effects and the sublime* (1995), Morley's *Staring into the contemporary abyss: the contemporary sublime* (2010), as well as Vivian Sobchack's *Embodying transcendence: on the literal, the material, and the cinematic sublime* (2008), have proven to be invaluable. David E Nye's seminal book, *American technological sublime* (1994) is used as the foundation for explaining the sublime in SF works and film in particular. Nye explains how Americans at first welcomed the technological sublime with the same zeal as the natural sublime of Burke and Kant. Morley's 2010 collection of essays by various theorists in *The sublime. Documents of contemporary art* proved helpful in providing assorted opinions on the unrepresentable, transcendence and technology as related to the sublime.

Regarding science fiction as a genre, and in particular, science fiction film, Annette Kuhn's compilation of essays in *Alien zone: cultural theory and contemporary science fiction cinema* (1990) and *Alien zone II: the spaces of science fiction cinema* (1999) are pivotal in their explanation of how science fiction is related to socio-cultural practices and in their identification of gaps in the study of science fiction film. Adam Roberts' 2005 book, *The history of science fiction* and Keith Johnston's 2011 work, *Science fiction film: A critical introduction* are crucial and comprehensive studies of the history and development of the SF genre. Furthermore, the research conducted by Vivian Sobchack on the cinematic sublime, as well as her in-depth study of science fiction cinema, are key contributors in the formulation of this study, specifically the book, *Screening space: the American science fiction film* (1987). Scott Bukatman's book *Terminal identity: the virtual subject in postmodern science fiction* (1993) is fundamental in examining technological themes in science fiction.

Secondary sources for film analysis include journal articles, though these are limited due to the recent release dates of the films examined, particularly *Interstellar*. Hence, critical film reviews from reputable online journals and magazines are also used to examine the films in the case studies, as well as production notes and commentary on DVDs by the filmmakers.

1.4 Methodological approach

The methodology used for this research is qualitative with its main thrust being the application of the philosophy of the sublime as evoked and represented in specific science fiction films. It is based on research and theories by key academics, philosophers, authors and

commentators on the three ‘arms’ of the topic: The sublime, the science fiction genre and specific science fiction films. The study takes these three key areas of the research topic and aims to find links between them, extrapolating them to forge new connections that lead to the science fiction film sublime.

The methodology for discussing the case studies are varied, involving and combining elements of semiotics, by discussing the relationship between signifiers and the signified in art, including visual icons/tropes in SF. Roland Barthes (1986:42) writes that the “signified is not a ‘thing’ but a mental representation of a ‘thing’”. Similarly, iconic figures like aliens point to thematic concerns like the feelings of alienation or to the alien other. However, the discussion does not necessarily overtly refer to semiology.

The study also mentions psychoanalysis, including Jacques Lacan’s “mirror stage” and Sigmund Freud’s work on “the uncanny”. Ideologically, feminism, particularly as applied to both the sublime and science fiction, is discussed as a movement within the SF genre, as well as in the sublime. The work done by Barbara Freeman on the feminine sublime is crucial, with her discussion being a rejection of Kant’s belief that the sublime, with its focus on Reason, would apply to men and the beautiful to women. Freeman (1997:10) states that the feminine sublime concerns a “site of passage and border crossing in which meanings collide and transform one another”.

Science fiction is a genre that often refers to and points to itself, hence an intertextual approach is considered, while cultural discourse is also utilised. Kuhn (1990:10) argues that SF film can be analysed using five cultural instrumentalities namely: A reflectionist model that sees SF as a mirror to “the preoccupations of the historical moment” or the *zeitgeist*; secondly, SF as a “mediation of ideologies”; thirdly a psychoanalytic approach regarding repressions found in science fiction; the fourth is looking at what impact SF has on its viewers; and finally, the intertextuality of “cultural meanings and discourses”.

The film analysis has a two-tiered approach. Firstly, it considers how the sublime is evoked through various special effects in the cinema. Secondly, it examines how the sublime is represented through the narrative and thematically. Various iterations of the sublime are considered in the analysis, including Kant, Burke, the technological sublime, the uncanny sublime, the cinematic sublime and the contemporary sublime.

1.5 Overview of chapters

The study begins with an examination of the origins of the philosophy of the sublime and its development with a particular focus on the Enlightenment of the eighteenth and nineteenth centuries. This period saw the publication of the treatises of both Edmund Burke and Immanuel Kant, who form the seminal base from which a discussion of the 'evolution' of the sublime may take place.

Chapter Three is a discussion of other iterations of the sublime that developed following Burke and Kant. This includes the influence of the Industrial Revolution on the American technological sublime, the contemporary scientific/technological sublime, the cinematic sublime, as well as the feminine/material sublime. This examination is necessary as elements of all or some of these versions of the sublime may be found in various science fiction films.

Chapter Four examines what science fiction is by highlighting the iconography and visual tropes present in SF that help 'identify' the genre. This is followed by an overview of the history of science fiction as a genre in literature and film, showing how these visual icons/tropes developed. Furthermore, SF film's close affinity with special effects is discussed.

Chapter Five considers how the sublime is evoked by special effects in science fiction films. Furthermore, the representation of the sublime in SF films through the plot and the themes is examined. This takes the discussion towards the science fiction film sublime and sets the stage for the film analysis in the next chapter.

In Chapter Six, three case studies are used to illustrate the special effects sublime and the representation of various iterations of the sublime in film through the narrative. *Under the Skin* (Jonathan Glazer 2013), *Tron: Legacy* (Joseph Kosinski 2010) and *Interstellar* (Christopher Nolan 2014) are used to show how both visual and sound effects may be used in different ways to evoke the sublime, while various themes typical to science fiction may represent the sublime.

Chapter Seven is the conclusion to the study and brings together all the threads of the argument by providing a summary of the previous chapters. The chapter proposes possible contributions made by the study to the body of work on the science fiction sublime, as well as the limitations of the study and suggestions of areas for further research.

CHAPTER TWO: A HISTORICAL AND THEORETICAL OVERVIEW OF THE SUBLIME

Any discussion of the sublime in art and philosophy is inherently complex and evades fixed meaning. The definitions of the concept as used in the arts and philosophy are varied. The term has undergone marked changes since it was first introduced nearly two millennia ago, with the word and concept being adapted to that which is pervasive at the particular times in history at which it emerges, in other words, the sublime is influenced by the *zeitgeist* in culture, art and philosophy. Some theorists have questioned whether it is at all possible to form a coherent theory of the sublime, as was explained in the introduction. Part of the conundrum lies with the contemporary, colloquial, casual use of the word. Food may be described as sublime, so too luxury consumer objects or experiences like concerts. This chapter traces the origins of the sublime until the discourse reaches what may arguably be termed its pinnacle in the eighteenth century with philosophers Edmund Burke (1729-1797) and Immanuel Kant (1724-1804). This chapter examines the origin of the term, "the sublime", explains its history and compares the analyses of Burke and Kant as two of this concept's major proponents.

2.1 The origins of the sublime

According to the Oxford English dictionary (2014:[sp]), the word, "sublime", is an adjective that is used to described something of "very great excellence"; or a noun that denotes an "overwhelming sense of awe or other high emotion through being vast or grand". Furthermore, "sublimate" is also a verb used to describe a process in chemistry by which a substance changes directly from a solid into a gas without first becoming liquid, thereby 'skipping' a step. The etymology of the word has its roots in Latin, a combination of the term *sub* (up) and *limen* (the top piece of a door).

Philip Shaw (2006:[sp], emphasis in original) states that "[b]roadly speaking, whenever experience slips out of conventional understanding, whenever the power of an object or event is such that words fail and points of comparison disappear, *then* we resort to the feeling of the sublime". At the same time Timothy Costelloe (2012:2) argues that the sublime "at its etymological heart, carries the long history of the relationship between human beings and those aspects of their world that excite in them particular emotions, powerful enough to evoke transcendence, shock, awe, and terror".

The first writings on the sublime are found somewhere between the first and third centuries AD but it was only in the seventeenth century in France, that these were introduced into mainstream Western European philosophy. In 1674, the French Neo-Classical poet Nicolas Boileau-Despréaux (1636-1711) translated the treatise *Peri Hupsous*. The text was written by

the Greek philosopher Longinus between the first and third century AD. Boileau translated the title as *Du Sublime*, or *The Sublime*.

Luke White (2009:265) explains that Longinus' sublime considers the ability of poetry and rhetoric to transport the audience "in intoxicated ekstasis, a mode of being-outside-of-oneself, (dis)possessed, even".[7] Longinus (2006:3) writes that "the sublime, wherever it occurs, consists in a certain loftiness and excellence of language". For the philosopher, the sublime is found in the ability of the epic poet or political orator to move the audience. And, the transformative effect is best achieved by "privileging the elevated and expressive – 'noble thoughts' and 'strong emotions' – over form and structure" (Riding & Llewellyn 2013:[sp]).

Furthermore, Longinus (2006:3, emphasis added) states that the experience of the sublime is not about trying to persuade the audience by reason; instead, the sublime is "[t]hat which is admirable [and] ever confounds our judgment, and eclipses that which is merely reasonable or agreeable. To believe or not is usually in our own power; but the Sublime, acting with an imperious and irresistible force, sways *every* reader *whether he will or no*". Therefore, if a piece of writing is sublime, it will have the same impact on all audiences whether the individual wants to be swayed and elevated or not. There is no choice in the matter; it simply happens. Shaw (2006:[sp]) argues that "one catches it [the sublime], like a divine contagion". For Longinus, the sublime can, however, not be taught. Philosopher Francois Lyotard (cited by Shaw 2006:[sp]) explains the ability of the orator or poet to evoke the sublime requires "a certain '*je ne sais quoi'* to detect the presence of this 'inexplicable' and 'hidden' phenomenon; it takes a 'genius' to master its use".

Longinus (2006:5) identifies five elements of the sublime in writing.[8] These five elements are "grandeur of thought", "vehement and inspired passion", "figures of thought and figures of speech", "noble diction dignified expression, which is sub-divided into (*a*) the proper choice of words, and (*b*) the use of metaphors and other ornaments of diction"; and "majesty and elevation of structure". Longinus (2006:6) scoffs at those writers who try too hard to evoke the sublime, accusing them of using words that produce "an effect of confusion and obscurity, not of energy; and if each separately be examined under the light of criticism, what seemed terrible gradually sinks into absurdity". Thus, those writers and artists who consciously try to induce the sublime will inevitably fail. They are what Longinus (2006:7) describes as being guilty of

[7] *Exstasis* (also Ek-stasis) is Greek in origin, meaning "a displacement (of the mind), i.e. bewilderment, ecstasy" and "a throwing of the mind out of its normal state, alienation of mind" and this, in the context of this discussion, is taken to mean beyond oneself (Ekstatis [sa]).
[8] The five elements are not discussed in detail as they are not relevant to the conclusions about the sublime.

"over-elaboration", their works "ridiculous" or bombastic, with the philosopher describing them as puerile and as having "feeble and narrow minds".

But while the sublime, for Longinus, cannot be taught it is possible to point to its effects, specifically on the reader of a text and audience of a performance. Longinus names three ways in which this happens. Firstly, the joy created by the sublime work makes readers feel as if they themselves had created the ideas: "It is natural to us to feel our souls lifted up by the true Sublime, and conceiving a sort of generous exultation to be filled with joy and pride, as though we had ourselves originated the ideas which we read" (Longinus 2006:12). Secondly, the words need to represent more than just what is expressed, more than just words on paper or spoken out loud. It would, therefore, be impossible to be distracted from the sublime as it "takes a strong and lasting hold on the memory" (Longinus 2006:12). Thirdly, a work can only be considered sublime if it pleases *all* readers, making it a collective rather than individual experience: "For when the same book always produces the same impression on all who read it, whatever be the difference in their pursuits, their manner of life, their aspirations, their ages, or their language, such a harmony of opposites gives irresistible authority to their favourable verdict" (Longinus 2006:12).

For Longinus, the sublime is made manifest through rhetoric and in his treatise, he often refers to concepts of deity and even cites Genesis 1:3 as one of the highest examples of the sublime: "And thus also the lawgiver of the Jews, no ordinary man, having formed an adequate conception of the Supreme Being, gave it adequate expression in the opening words of his "Laws": "God said" – what? – "let there be light, and there was light: let there be land, and there was" (Longinus 2006:19). The Judeo-Christian concept of God is often described in the Bible as incomprehensible, too high for human understanding. In Isaiah 55:9 God says, "For just as the heavens are higher than the earth, so my ways are higher than your ways and my thoughts are higher than your thoughts" (Life application study Bible 2004:1179). God, therefore, is ineffable. Shaw (2006:[sp]) argues the New Testament, in particular, is important to consider when discussing the origin of the sublime, as this text was compiled around the same time as Longinus's *On Sublimity*. The story of Christ, for instance, highlights his dual nature as both man and divinity: "'lowly and sublime, *humilis et sublimis*'" (Erich Auerbach cited by Shaw 2006:[sp]).

2.2 The development of the sublime in the seventeenth and eighteenth century

The sublime re-emerges in seventeenth-century Neo-Classicism with Boileau's translation of Longinus, as indicated above. But, Longinus's emphasis that rules and reason are inadequate to create the sublime seems to contradict Neo-Classicism's rules that art must be rational and measured in order to be sublime.

From Neo-Classicism, the sublime emerges during the Romanticism of the eighteenth century, during which the sublime is evoked mainly through forces of nature. British writers of the seventeenth and eighteenth centuries began to formulate an idea of the natural sublime, sometimes taking Longinus as their starting point. During the 1680s theorist Thomas Burnet (1635-1715) writes in *Sacred Theory of the Earth* (1681) that the great heavens, the boundless stars, wide seas and mountains recall the greatness of God. These natural images suggest the idea of infinity: "'And whatsoever hath but the Shadow and Appearance of the INFINITE, as all Things have that are too big for our Comprehension, they fill and overbear the Mind with their Excess, and cast it into a pleasing kind of Stupor and Admiration'" (Burnet cited by Shaw 2006:[sp]).

At this time, nature became fundamentally linked with the experience of the sublime. Young men with the means were expected to do a Grand Tour of Europe to finish off their education, something that often took them across the Alps. Literary theorist John Dennis (1657-1734) describes his own passage through the mountains: "'we walk'd upon the very brink, in a literal sense, of Destruction; on Stumble, and both Life and Carcass had been at once destroy'd. The sense of this produc'd different motions in me, viz, a delightful Horrour, a terrible Joy, and at the same time, that I was infinitely please'd...'" (quoted by Ashfield & de Bolla 1996:59). As is discussed later in this chapter, the idea of the sublime as negative pleasure becomes important to Immanuel Kant, one of the most significant theorists on the sublime.

The sublime was inextricably connected to religion, spirituality, Christianity and the notion of the divine. Not only was it believed that God created nature and its forces, he was an entity both worshipped and feared in his omnipotence and infinity. Dennis was one of the first authors to use the notion of the sublime to name these feelings. Following from Longinus, Dennis locates the sublime in poetry, as it infers the inexpressibility of God. Dennis (cited in Ashford & de Bolla 1996:38) states that "'nothing is so terrible as the wrath of infinite power, because nothing is so unavoidable as the vengeance designed by it... He may deliver us from all other terrors, but nothing can save and defend us from him'".

The notion of the sublime as something evoked by the divine is no more evident than in the works of the poet John Milton (1608-74), whose epic poem *Paradise Lost* (1667) is often cited by theorists to show how poetry is elevated as the form of language with the power to point to the ineffability of God. Edmund Burke (2005 [1757]:133) in his treatise, *A philosophical enquiry into the origin of our ideas of the sublime and beautiful*, uses Milton's description of "the universe of Death" in Book 2 as an example of the sublime:

> The other shape, If shape it might be called that shape had none
> Distinguishable, in member, joint, or limb;

> Or substance might be called that shadow seemed;
> For each seemed either; black he stood as night;
> Fierce as ten furies; terrible as hell;
> And shook a deadly dart. What seemed his head
> The likeness of a kingly crown had on.

For Burke, the dark, dim images in the poem resulted in the passions characterised by the sublime. As Victoria Kahn (1992:193) explains, both Burke and Romantic poet Samuel Taylor Coleridge (1772-1834) saw an ambivalent sublimity in the death and sin of Milton's poem:

> On the one hand, it seems as though the poet's deliberate failure of representation allows greater freedom to the reader's imagination; on the other hand, the reader's failure to imagine anything precisely serves to refer the reader to what is described by Coleridge as 'a sublime feeling of the unimaginable', [something that] transcends the faculties of perception and imagination.

Another theorist of this time, Joseph Addison (1672-1719), attempts to list those things in nature that give rise to astonishment. Addison had done the same Grand Tour as Dennis and remarked that "[t]he Alps are broken into so many steps and precipices that they fill the mind with an agreeable kind of horror" (Addison 1837:374). Addison (1837:489) also writes that "[o]ur Imagination loves to be filled with an Object, or to graspe [sic] at any thing that is too big for its Capacity". However, Addison was unable to pin down the origins of why humans are driven to wonder at the greatness of nature's beauty. Like others before him, Addison (1837:493) concluded the ultimate cause is God: "The Supreme Author of our Being... has made them [human souls] naturally delight in the Apprehension of what is Great or Unlimited".

In addition, Addison pre-empts Burke in concluding that the sublime is experienced from a place of safety. Addison (1837:509) argues, "When we look on such hideous Objects, we are not a little pleased to think we are in no Danger of them. We consider them at the same time, as Dreadful and Harmless; so that the more frightful Appearance they make, the greater is the Pleasure we receive from the Sense of our own Safety". Ashfield and de Bolla (cited in Shaw 2006:[sp]) also highlight the importance of language to Addison, and the ability of rhetoric to "'change a threatening physical presence into a mental image that no longer 'presses too closely upon our senses'".

This period then sees a move away from the sublime in writing and rhetoric to the overwhelming and arresting encounters caused by the sublime in nature. This move is illustrated when dramatist John Baillie (1747:[sp]) makes a link between writing and nature, stating that "the sublime in writing is no more than a description of the sublime in nature, and as it were painting to the imagination what nature herself offers to the senses". Baillie admits difficulty though, in being able to exactly define the fundamental nature of the sublime. The question is whether the sublime is caused by the objects of nature, or instead, ideas of the

mind, something that Kant grappled with as is unpacked shortly. For Baillie (1747:[sp]), grand objects “extend” the soul to the point where the soul becomes conscious of its own vastness, exulting in it.

2.2.1 Edmund Burke and the empirical sublime

Therefore, the sublime became a distinct aesthetic category in the eighteenth century. In Britain, Burke’s treatise was one of the most influential texts in the theory of the sublime. Burke’s theory is described as empirical, as “physiological” and a “critique of reason” (Ryan 2001:266). Burke (2005 [1757]:110-111) states, “Whatever is fitted in any sort to excite the ideas of pain and danger, that is to say, whatever is in any sort terrible, or is conversant about terrible objects, or operates in a manner analogous to terror, is a source of the sublime; that is, it is productive of the strongest emotion which the mind is capable of feeling”. This terror, however, cannot be too close to the subject; it must be observed from a distance. Burke (2005 [1757]:111) states that “[w]hen danger or pain press too nearly, they are incapable of giving any delight, and are simply terrible; but at certain distances, and with certain modifications, they may be, and they are, delightful, as we every day experience”.

Herein lies two components of the sublime: The fear of danger and the need for the danger to be observed from a distance. White (2009:71) argues that the pleasurable horror is related to a “representation of death: precisely that which Burke calls the ‘king of terrors’ and places at the heart of the sublime”. Therefore, the sublime concerns humans’ sense of their own mortality.

Gasché (2012:28) surmises that Burke’s “terror” has a cathartic effect on the mind and body, but also, reanimates the two i.e. it recreates “the bodily and mentally vital principles”. Therefore, the experience of the sublime is linked to self-preservation – the desire to protect oneself from harm. Following on from Burke’s link between terror and astonishment, Gasché (2012:29) explains that the state of so-called “delightful horror”, is the “sudden awareness of being alive”.

Burke often uses objects of nature as examples of where the cause of the sublime may be found but also cites man-made objects, such as buildings, and words (like in poetry). In nature, the result of the sublime is astonishment, which Burke (2005 [1757]:131) describes as

> that state of the soul in which all its motions are suspended, with some degree of horror. In this case the mind is so entirely filled with its object, that it cannot entertain any other, nor by consequence reason on that object which employs it. Hence arises the great power of the sublime, that, far from being produced by them, it anticipates our reasonings, and hurries us on by an irresistible force.

The mind, therefore, is arrested; it is so filled that it displaces all other objects/thoughts. Furthermore, the mind cannot rationalise that object because the sublime, for Burke, cannot be produced by reason. Burke (2005 [1757]:131-164) identifies several aspects of the sublime that can overwhelm the mind, many of which may be applicable to the study of the sublime in science fiction film, which is discussed later in the study:

1. Fear (which is able more than anything else, to rob the mind of its powers of reasoning).
2. Obscurity (which confuses judgment).
3. Power (because one does not submit willingly to the things that cause terror).
4. Privation (or deprivation).
5. Vastness (which is beyond understanding).
6. Infinity (which causes awe). This includes the "artificial infinite" (succession and uniformity), as well as magnificence to some extent.
7. Loud sounds that are overwhelming.
8. Suddenness (which shocks the senses and arrests the mind).
9. Darkness and light, which constrain the sense of sight.

These aspects are found most often in nature or anything that involves the senses (sight, sound, taste, smell and touch). For Burke, without the empirical, it would be impossible to observe or experience the sublime.

Firstly, fear "operates in a manner that resembles actual pain" because it is "an apprehension of pain or death" (Burke 2005 [1757]:131). The 'delight' follows afterwards through self-preservation. Pain and danger are "delightful when we have an *idea* of pain and danger, without being actually in such circumstances; this delight I have not called pleasure, because it turns on pain, and because it is different enough from any idea of positive pleasure. Whatever excites this delight, I call sublime" (Burke 2005 [1757]:126, emphasis added). It is the realisation that the experience of danger is *possible* rather than actual, that produces the sublime. One of the themes in science fiction is imagined futures, which are often uncertain and frightening. At the same time, as a genre, whether in literature or film, science fiction is a representation of possible danger rather than actual danger. Istvan Csicsery-Ronay Jr

(2008:3) explains that this "gap lies between the conceivability of future transformations and the possibility of their actualisations".[9]

As Vanessa L Ryan (2001:266) argues, "The sublime for Burke is a question not of the subject's increasing self awareness but of the subject's sense of limitation and of the ultimate value of the experience within a social and ethical context". Therefore, there is a certain constraint placed on the mind through its inability to comprehend or rationalise the object of the sublime. The sublime object evokes a feeling, but this feeling is not completely understood. Ryan (2001:270) argues that Burke tries to show that "the fundamental effect of the sublime is to exclude the power of reason. Thus, the paralysis [the suspensions of all motions Burke refers to] is not general… but is limited to our rational capacity". It is the mind rather than the body that is robbed through fear, even though the cause has to be experienced through the physical i.e. the senses.

Secondly, obscurity Burke (2005 [1757]:133) argues, is generally necessary for something to be terrible or frightening because if a person can fully observe the object in question, part of the terror disappears.[10] Shaw (2006:[sp]) explains that "whatever is obscure, our ideas about death or the nature of existence, for example, is terrifying and therefore sublime precisely because it cannot be presented to the mind in the form of a clear and distinct idea". Here emerges a theme that is found in various theories about the sublime: A failure to articulate the idea of the sublime to the self. In science fiction, the future is obscure: It is imagined and by attempting to represent something imaginary on screen there is an innate failure to articulate. This is something that is explored further later in the study. For Burke, it is that which evokes ideas of infinity or eternity that is sublime, because these concepts are in reality impossible to understand; they are obscure. Burke is subsequently very dismissive about visual images' ability (or inability) to portray the sublime. A painting is too clear, too distinct. Burke (2005 [1757]:137) states:

> But let it be considered that hardly anything can strike the mind with its greatness, which does not make some sort of approach towards infinity; which nothing can do whilst we are able to perceive its bounds; but to see an object distinctly, and to perceive its bounds, is one and the same thing. A clear idea is therefore another name for a little idea.... Is it not wrapt up in the shades of its own incomprehensible darkness, more awful, more striking, more terrible, than the liveliest description, than the clearest painting, could possibly represent it?

[9] Juneko J Robinson (2009:24) states some of the central concerns of science fiction include "fear, anxiety, dread, passion, death, [and] human finitude".

[10] Here, as he does often throughout his treatise, Burke refers to the poet, John Milton's epic work, *Paradise Lost*. Milton describes the creation, the fall of Lucifer, aspects of hell and the temptation and subsequent fall of the first man and woman. Burke (2005 ([1757]:133) calls Milton's descriptions of hell "dark, uncertain, confused, terrible, and sublime to the last degree".

The next trait of the sublime is power: "Pain is always inflicted by a power in some way superior, because we never submit to pain willingly. So that strength, violence, pain, and terror, are ideas that rush in upon the mind together" (Burke 2005 [1757]:139). Even though the sublime is experienced at a distance, the very idea of pain holds power over the mind, because it is reminiscent of death, which holds the ultimate power over life. Burke (2005 [1757]:139) argues that "wheresoever we find strength, and in what light [who]soever we look upon power, we shall all along observe the sublime the concomitant of terror". In science fiction, tropes like the alien invader (as seen in the *Alien* films), or the Artificial Intelligence that surpasses human ability (for example in Alex Proyas' 2004 film *I, Robot* and James Cameron's *Terminator* in 1984) may reflect concerns of that which is more powerful than humans. Susan Mandala (2010:14) explains there are many science fiction works that reveal "humans to be no more than puppets to some greater power".

Privation (or deprivation) is another characteristic of the sublime. Burke (2005 [1757]:147) is referring to "darkness, solitude, and silence", things that are terrible because they are "great". When the senses are deprived, terror is evoked. This characteristic of the sublime is present in films like the 1980 classic, *Altered States* (Ken Russell), about an experiment involving sensory deprivation.[11]

One of the most powerful causes of the sublime, according to Burke, is "greatness" i.e. in dimensions or scale. Burke (2005 [1757]:148) states that

> height is less grand than depth; and that we are more struck at looking down from a precipice, than looking up at an object of equal height; but of that I am not very positive. A perpendicular has more force in forming the sublime, than an inclined plane, and the effects of a rugged and broken surface seem stronger than where it is smooth and polished.

However, "greatness" does not only refer to things that are big or have great magnitude. It can also refer to that which is minute, or extremely little:

> When we attend to the infinite divisibility of matter, when we pursue animal life into these excessively small, and yet organized beings…; when we push our discoveries yet downward, and consider those creatures so many degrees yet smaller, and the still diminishing scale of existence, in tracing which the imagination is lost as well as the sense; we become amazed and confounded at the wonders of minuteness (Burke 2005 [1757]:148-149).[12]

[11] In *Altered States* a scientist studies how using sensory deprivation and hallucinatory drugs can achieve transcendent states of consciousness, and ultimately cause regression in a subject. The scientist experiments on himself and becomes terrifyingly ape-like and violent the more time he spends in the sensory deprivation tank, which takes him backwards, down the evolutionary chain.

[12] Notably, it was during the early 1800s that English scientist John Dalton formulated the first atomic theory i.e. the notion that matter can be divided into small particles that are indivisible (Sydney Ross 2018:[sp]). It was later proved that atoms can in fact be divided into even smaller particles, namely electrons, protons and neutrons (Marcus Chown 2007:45).

In science fiction, the magnitude of space (explored in films like *2001: A Space Odyssey*),[13] as well as representations of that which is minuscule (such as in *Interstellar*, discussed later in the study), are examples of Burke's location of the sublime in greatness.

The "truest test" of the sublime for Burke (2005 [1757]:149), however, is infinity, which "has a tendency to fill the mind with that sort of delightful horror, which is the most genuine effect". The concept of infinity is not just an abstract one, however, such as the inability to comprehend the vast sky. It is an idea produced when the senses fail. For example, when one's sight fails one is no longer able "to perceive the bounds of many things, they seem to be infinite, and they produce the same effects as if they were really so" (Burke 2005 [1757]:149). Again, the infinitude of outer space is an example of the senses' inability to perceive that which is boundless (something that is explored in films like Alfonso Cuarón's *Gravity* in 2013).[14] Scott Bukatman (1995:267, emphasis in original) argues that the infinite nature of the universe is confounding and that the "precise function of science fiction, in many ways, is to *create* the boundless and infinite stuff of sublime experience…".

The next aspect of the sublime involves succession and uniformity, which Burke (2005 [1757]:150) calls "the artificial infinite". Succession is when the parts of something are continued "so long and in such a direction" that they "impress [on] the imagination… an idea of their progress beyond their actual limits" (Burke 2005 [1757]:151). A long line of pillars, for example, will eventually disappear from sight due to perspective, creating the idea that they are continuing even beyond the point at which it is no longer possible to see them. Uniformity means no boundary can be found; the eye continuously sees the same thing. Burke (2005 [1757]:151) uses the example of a rotund: "Turn which way you will, the same object still seems to continue, and the imagination has no rest". Outer space is an example of this characteristic of the sublime as it continues infinitely, no matter which way a subject would turn. Science fiction film through its use of special effects may be considered as an embodiment of this succession and uniformity. Bukatman (1995:268) refers to special effects as the "artificial infinite", because these effects are "rhetorical allusions to the unpresentable forms of infinity". While outer space is not, in real life, artificial, the representation thereof in film, is.

[13] The way in which the sublime is present in *2001: A Space Odyssey* is discussed further in Chapter Four.
[14] In the film *Gravity*, two astronauts are stranded in space when their spacecraft is destroyed. For most of the film, Dr Ryan Stone (Sandra Bullock), drifts through the expanse alone when her colleague dies. There are long shots to illustrate the vastness of space while the film often uses silence to create the sense of a vacuum and boundlessness.

Grandeur or “magnificence” is another aspect of the sublime and also relates to infinity. Magnificence is a “great profusion of things, which are splendid or valuable in themselves” (Burke 2005 [1757]:155). For Burke, the starry night sky is a great example of this. This is not because of the stars themselves, but rather because of their great number. In contrast to the aspects of succession and uniformity, the stars’ “apparent disorder” and “apparent confusion” enhance their grandeur, creating a “sort of infinity” (Burke 2005 [1757]:155).

Burke elevates sight above the other senses, as a conduit for the sublime experience. Darkness, light and colour are important sources of the sublime. Although darkness, in its relation to obscurity, is most frightening, a strong source of light, such as the sun, is so powerful “that it obliterates all objects, so as in its effect exactly to resemble darkness. After looking for some time at the sun, two black spots, the impression which it leaves, seem to dance before our eyes” (Burke 2005 [1757]:158). Colours must be dark, gloomy and murky to evoke the sublime. The sky must not be blue and a building must have “sad and fuscous colours, as black, or brown, or deep purple, and the like” (Burke 2005 [1757]:158). Special effects, for example, are dependent mostly although not exclusively on vision than the other senses. Dark, gloomy, desaturated colours are visual characteristics of many dystopian science fiction films, like *Blade Runner* (Ridley Scott 1982) and the Wachowskis’ *The Matrix* (1999).

However, even though vision might be the primary sense through which the feeling of the sublime is evoked (whether in nature or in film), the others senses also play a significant role in evoking the sublime. Burke (2005 [1757]:16) states that excessively loud sounds “overpower the soul… suspend its action, and… fill it with terror” – massive waterfalls, storms, thunder, the artillery of war, the “shouting of multitudes” – these sounds amaze and confound the imagination. In science fiction film, for example, large battle scenes will result in loud noises that may have the same effect. Furthermore, suddenness, that is, when a sound or other force either starts or ends abruptly, can startle the subject, putting them on their guard and resulting in “a perception of danger”. A sudden, unforeseen bang from a blast or gun in a film is an example of this. At the same time and in almost direct contrast, Burke (2005 [1757]:162) states that a “low, tremulous, intermitting sound” can also produce a sublime effect, such as a sound that happens at night when there is confusion about the source of that sound, which may result in a sense of terror. The use of such sound effects in cinema, particularly in surround sound, can also help evoke the feeling of the sublime.

Another of the senses – that of touch – can evoke the sublime through the idea of bodily pain. However, there can be no actual physical pain because the subject must be at a distance from

danger to experience the terror of the sublime. It is “anguish and torment” which are productive of the sublime (Burke 2005 [1757]:165). The olfactory and gustatory senses are considered the weakest in their ability to produce the sublime. Only bitter smells and foul stenches may be sources of the sublime, when moderated through description such as in poetry or metaphor, for example, “to drain the bitter cup of fortune” (Burke 2005 [1757]:163).

However, Burke admits that it is not only that which occurs in nature that results in encounters with the sublime. Like Longinus, Burke argues that words can evoke feelings of the sublime and it is important to consider how words and language do this, as it speaks to the ineffability of the sublime as a phenomenon because it is only through representation, whether through words or images, that the experience of the sublime may be described. In the section, “How words influence the passions”, Burke (2005 [1757]:259-260) states, “there are many things of a very affecting nature, which can seldom occur in the reality, but the words that represent them often do; and thus they have an opportunity of making a deep impression and taking root in the mind, whilst the idea of the reality was transient; and to some perhaps never really occurred in any shape”. Many people do not experience such things as war or famine personally, but words and images of these experiences have an impact. Both articles and photographs of war and violence, for example, often come with trigger warnings due to the visceral, emotional reaction and effects that may be elicited. Burke again refers to religious imagery in Milton, such as “God, angels, devils, heaven, and hell”. Heaven and hell can only be referred to through language, as they cannot be experienced in reality. Shaw (2006:[sp]) states that “[i]t is language that enables us to select and combine ideas, so as to render even the most unprepossessing object sublime”. However, the words themselves may cause the development of visual imagery in the imagination. Even though there is a failure of words to clearly represent the sublime, “it succeeds as a means of ‘conveying the *affections* of the mind from one to another’” (Shaw 2006:[sp], emphasis in original).

Whereas for Baillie, as previously mentioned, there is a connection between signifier (the object in nature) and the signified (the feeling of the sublime), Burke finds difficulty in relating these two concepts because of the inability of words or language to *truly*, that is, in reality, create meaning (evocation of the feeling of the sublime). Description will always fall short, whereas the actual object of nature seems to have a direct relationship with the mind. The reason for this lies in Ryan’s (2001:270) argument that Burke “minimise[s] mental activity: his insistence on looking to the physical to explain the internal, psychological effects of the sublime breaks with a well-established assumption that the sublime is allied with an elevation of the mind”. This is in contrast with Kant’s theory on the sublime, which is transcendental as opposed to empirical.

2.2.2 Immanuel Kant and the transcendental sublime

The other key philosopher and theorist who focused on the sublime during the eighteenth century is Kant, whose 1790 treatise, *Analytic of the sublime in the critique of judgement*, is considered seminal in the study of the sublime. Kant pays tribute to Burke and the latter's division between the beautiful and the sublime. But, Kant takes Burke's theory a step further, shifting away from judging the object, to judging the mind (Ryan 2001:265).

Kant (1914 [1790]:§23) states, "The beautiful in nature is connected with the form of the object, which consists in having boundaries. The sublime, on the other hand, is to be found in the formless object, so far as in it or by occasion of its boundlessness is represented, and yet its totality is also present to thought". The sublime, for Kant, is not in the physical object of nature such as the towering mountain or the edge of an abyss, instead, it is found in something boundless, thus, formless. An object of nature may be beautiful but cannot in itself be sublime. Furthermore, Kant (1914 [1790]:§23) refers to the sublime not as a "positive pleasure" but as a "negative pleasure". This negative pleasure "arises only indirectly; viz. it is produced by the feeling of a momentary checking of the vital powers and a consequent stronger outflow of them, so that it seems to be regarded as emotion" (1914 [1790]:§23).

Accordingly, if the object cannot be the source of the sublime, the question arises: From whence does it come, or, where does the sublime reside? For Kant, the sublime resides in the mind, within the faculty of Reason.[15] Kant (1914 [1790]:§24) states the sublime brings about a "movement of the mind" in contrast with the beautiful which puts the mind in a "restful state". The sublime is active; the beautiful is passive. If there is movement in the mind, there is thought and reasoning. This contrasts with Burke's sublime which "arrests" and fills the mind to the point that nothing else can be thought of or done. Bettina Reiber (2009:87, emphasis added) states that one does not name objects themselves as sublime, such as "'the ocean is sublime'" (which is an objective claim); one says "'*this* is sublime'", which says something about the self, about "me as a *subject*".

Kant (1914 [1790]:§23, emphasis added) argues that

> the object is fit for the presentation of a sublimity which can be found in the *mind*: for no sensible form can contain the sublime properly so-called. This concerns only Ideas of the Reason, which, although no adequate presentation is possible for them, by this inadequacy that admits of sensible presentation, are aroused and summoned into the mind. Thus, the wide ocean, agitated by the storm,

[15] "Reason" is capitalised in this study whenever referred to in a Kantian sense.

> cannot be called sublime. Its aspect is horrible; and the mind... is incited to *abandon sensibility and to busy itself with ideas that involve higher purposiveness.*

This forms part of what Kant calls "transcendental idealism", which concerns the experience of the subject rather than what is inherently true about an object. For example, Kant uses the term "*a priori*" knowledge, which is something that is not known through experience (like it is for Burke), but rather concepts that are universal truths, independent of experience. This includes concepts like time and space. Shaw (2006:[sp]) explains that "[t]hinking... must transcend mere sensible intuitions (the immediate evidence of the senses), so as to establish the existence and nature of the *a priori*". Ideas like freedom and infinity are concepts carried within oneself.

Kant sub-divides the sublime into two categories: The mathematical sublime and the dynamical sublime. Firstly, the mathematical sublime is that which involves magnitude and quantity: "We call the sublime that which is absolutely great … beyond all comparison"; it is a "concept of judgement" and is subjective (Kant 1914 [1790]:§25). The mathematical sublime includes ideas such as "time", "eternity", and "infinity". These are notions that are explored in science fiction films like *Interstellar*, which will be discussed in Chapter Six as an example of the SF sublime.

However, even though the mathematical sublime involves that which is beyond comparison, the mind will automatically attempt to understand the greatness of such concepts by trying to apply units of measurement to them. This frustrates the mind though because trying to turn an "absolute" concept into a "comparative one" contradicts the assertion that the sublime should be beyond comparison. As Shaw (2006:[sp]) argues "the sublime… appears to frustrate judgement, to the extent of calling its autonomy into question;… [the sublime] is presented here as an affront or 'outrage' to our powers of comprehension". It is in this that the negative pleasure of the sublime lies. Slavoj Žižek (1989:229) states the "displeasure [is] because of its inadequacy to the Thing-Idea, but precisely through this inadequacy it gives us pleasure by indicating the true, incomparable greatness of the Thing, surpassing every possible phenomenal, empirical experience".

Kant (1914 [1790]:§25) explains that when anything is called "great", the magnitude has to be "superior" to other objects, but without the subject being able to exactly determine *what* this superiority is. Therefore, the sublime object is *indeterminate*. There is a failure in being able to describe exactly how and why the object is sublime. The mathematical sublime, therefore, is subjective. Kant (1914 [1790]:§25) argues that there is an underlying assumption that

everyone has the same standard upon which judgment is based, but in reality, any "logical (mathematically definite)" is subjective. When an experience is subjective, there is an inability in describing or representing the "Thing" to anyone else.

Shaw (2006:[sp], emphasis added) uses the example of the contemplation of the stars to describe this failure:

> The ability of imagination to present an object 'fit' for understanding *necessarily fails*, yet this does not prevent my sustaining the 'idea' of the universe as infinitely great. The concept of infinity… is presented negatively by virtue of the inability of imagination to present an object that would be adequate to the concept. In the mathematical sublime, the mind is so overwhelmed by magnitude, that the imagination simply cannot comprehend it all at once; it overwhelms.

Kant's (1914 [1790]:§25) interest is not in the actual object as much as it is that "its existence is indifferent to us"; its "mere size, even if considered as formless, may bring a satisfaction with it that is universally communicable, and that consequently involves the consciousness of a subjective purposiveness in the use of our cognitive faculty". Hence, objects or concepts like time, eternity and infinity have no form. Time may be measured in units but it cannot be seen, or heard, or touched. Therefore, the (dis)satisfaction or negative pleasure cannot come from the object but rather from "the extension of the imagination by itself". Subsequently, the sublime lies in the Idea of the subject or recipient of the experience of the sublime.

Jane Forsey (2007:384) states that the mathematical sublime occurs when the "incommensurability of imagination with the totalizing demands of reason produces at first a displeasure in our experience of failure and then a subsequent pleasure that is aroused by 'the feeling of a supersensible faculty' – our awareness of the superiority of our powers of reason". Kant (1914 [1790]:§25) describes this as "the state of mind produced by a certain representation with which the reflective judgement is occupied, and not the object, that is to be called sublime". The sublime, therefore, *surpasses* the senses. The subject is initially frustrated by their inability to understand or imagine the sublime but then, a pleasure is evoked by this very failure.

The failure and inadequacy of the mind to estimate the magnitude of objects "excites in us the feeling of a supersensible faculty" (Kant 1914 [1790]:§25). Therefore, the objects of the mathematical sublime seem to always, and inherently, be out of reach. Part of the "negative pleasure" lies in the process of trying to grasp something that cannot be grasped, that is elusive and unattainable. Kant (1914 [1790]:§26) states,

> An object is monstrous if by its size it destroys the purpose which constitutes the concept of it. But the mere presentation of a concept is called colossal, which is

> almost too great for any presentation (bordering on the relatively monstrous); because the purpose of the presentation of a concept is made harder [to realise] by the intuition of the object being almost too great for our faculty of apprehension.

Furthermore, there is displeasure in the inability of the mind to try and measure infinity. However, as Reiber (2009:86) argues there is also elation in this because "[w]e realise that we are more than our ability to measure and control, that we are able to relate to the world in ways different from those of science and measurement".

Therefore there is a kind of a dichotomous relationship at the heart of the mathematical sublime: Negative pleasure is created through failure, a deficit that cannot be overcome. Nevertheless, the knowledge of this deficit is a reminder of the greatness and superiority of Reason, of the mind's attempt to overcome the senses and remove the "Thing" from "Thing-Idea", and move to "Idea". The experience of being drawn out of sensuous experience towards acknowledging the powers of Reason is, therefore, transcendental.

Kant (1914 [1790]:§27, emphasis added) declares that "the transcendent… is for the imagination like an abyss in which it fears to lose itself; but for the rational idea of the supersensible it is not transcendent but in conformity with law to bring about such an effort of the imagination, and consequently here there is the same amount of *attraction and repulsion* for the mere sensibility". Therefore, there is a kind of push-pull occurring within the mind, between attraction and repulsion caused by the inability to comprehend that which is mathematically sublime. This is comparable to the Greek paradox of the dyad, which is something that "simultaneously divides and unites, repels and attracts, separates and returns" (Priya Hemenway 2005:52). The inability to understand the boundlessness that is at the heart of the mathematical sublime is a failure to connect a signifier (the formless object, such as time) with a signified (meaning). Thus, there is an inability to measure or quantify the boundless, incomprehensible object or concept (like eternity and infinity) into something comprehensible.

Melissa McBay Merritt (2012:38-39) explains that Kant's treatise is about the conflict between the subject's ability to represent "sensible things (imagination)" versus the ability to "represent the supersensible (reason)". Hence, the sublime is the state of mind in which one takes "pleasure in the failure of sensible representation, because this failure enables us to appreciate the power of reason to conceive what can never be met with in the senses, or rendered in sensible representation" (Merritt 2012:39). The mathematical sublime regards the capacity to represent the supersensible, or Reason, because of the failure of imagination to

represent the object of the sublime. Science fiction film attempts to represent objects of the sublime, but may inevitably fail in this, as it too, relies on language (albeit visual language) to make such representations. Film, like spoken or written language, fails to adequately or accurately create a signifier to represent the signified.

Whereas the mathematical sublime is about an object of overwhelming magnitude (that which is "great" in spatial expansion), the dynamical sublime is about great power in forces of nature, and the fear thereof. For something to evoke the dynamical sublime it must be considered as

> fearful, without [one] being afraid of it; viz. if we judge of it in such a way that we merely think of a case in which we would wish to resist it, and yet in which all resistance would be altogether vain. Thus the virtuous man fears God without being afraid of Him; because to wish to resist Him and His commandments, he thinks is a case as to which he need not be anxious (Kant 1914 [1790]:§28).

This fear refers more to a kind of reverence than to being afraid i.e. not the cowering feeling as if one is in danger because the dynamical sublime is a connection with the transcendental, not the physiological. It may appear as if Kant contradicts his previous notion that the sublime cannot be found in objects of nature because he names overwhelming forces of nature to explain the dynamical sublime such as "bold, overhanging… threatening rocks, thunderclouds piling up in the sky…, volcanoes with all their destructive power, hurricanes" (Kant 1914 [1790]:§28). However, strictly speaking, the dynamical sublime does not point to an intrinsic quality within the object of nature, but rather to the fear it causes, while the subject is at a distance from it, safe from what nature may do. The delight or pleasure of the dynamical sublime is experienced because it is contemplated from afar.

Hence, Kant (1914 [1790]: §28) argues that the more fearful these sublime events are, the more attractive they become provided that one is "in security", that is, in no actual danger. The mighty objects of nature, such as storms, are not sublime in themselves, but they "raise the energies of the soul above their accustomed height, and discover in us a faculty of resistance… which gives us courage to measure ourselves against the apparent almightiness of nature" (Kant 1914 [1790]:§28). Consequently, one can transcend the fear raised by these objects through Reason, which tells one the mind is 'superior' to this fear. Reiber (2009:84-85, emphasis added) states that the terror of the dynamical sublime and Kant's reference to the "outpouring" of "vital powers" refers to a feeling of "elation [that]... derives from the recognition that we are not ultimately determined by the force of nature. Unquestionably, we are *subject* to those forces and they *affect* us, but we are not determined by them. In the face of the terrifying power of nature we become aware of our innate capability to choose, of our power to determine our lives ourselves". Similarly, in science fiction film, the subject or viewer chooses to face something that may be considered terrifying, such as a devastating and

deadly virus, or an alien invasion, but the subject does so from a safe distance. No matter how advanced the special effects, there is no danger posed to the viewer.

The dynamical sublime occurs when the subject realises that while the forces of nature are real (they have real-world consequences such as being killed by a lightning strike), they have no physical bearing on the subject, who is at a distance away (inside a building for example, looking out at the lightning through a window), safe from harm. The elation or pleasure lies in the reasoning that the subject is 'superior' to the force of nature because he or she is untouched by it, even though the force itself may be dangerous. The faculty that makes this reasoning possible is the supersensible, which goes beyond the senses, and which then allows the subject to transcend the limits imposed by the senses. If one's senses cannot describe or delineate the experience of the sublime, whether it be due to something unquantifiable like infinity, or due to the elevation beyond a force of nature, it is necessary to surpass or triumph over the senses in order to access the sublime.

Therefore, just like the mathematical sublime, there is a push-pull between two seemingly contradictory thoughts or experiences – a continuous oscillation between the realisation that while the forces of nature cannot be controlled, these forces can neither control nor determine the subject. There is a certain kind of vanity in the subject's belief in the supremacy of the human mind over forces of nature, something that becomes an essential part of the technological sublime, in the attempt to tame nature and subjugate it to humans' will. This is discussed in the next chapter.

What is imperative is that the powerful force of nature represented in the dynamical sublime is not directly experienced, it is more of a representation. For example, viewing a fierce storm from behind a window is a mediated experience – there is something between the object of fear and the subject. During such an experience there is a realisation of the presence of the metaphysical or of the transcendent, that the phenomena of nature "may provide the catalyst for epistemological transcendence but they are not direct objects of sublime experience" (Forsey 2007:384). Similarly, a cinema screen creates a mediated experience, one in which that which is fearful is *represented*.

Both the mathematical and dynamical sublime concern the mind. It does not necessarily have to be an embodied mind, because unlike Burke, for whom the senses are crucial to the experience of the sublime, Kant is concerned with the faculty of Reason not with sight, sound and touch. For Kant, the object of the sublime, whether boundless (mathematical) or a force of nature (dynamical), is a means to an end, the goal of which is to take pleasure in the superiority of Reason. However rational this end goal is though, it is something that is difficult

to express outside of the mind. The question is whether the subjective thoughts of the various people experiencing the sublime can be accurately expressed and represented outside of the mind. As previously argued, the sublime is characterised by a difficulty to make it representable.

In Kantian tradition, Ryan (2001:266) argues discussions of the sublime should centre on the way the experience *affects* "the perceiving subject" and she asks: "Does the sublime enlarge us or diminish us?" For Burke, the sublime diminishes, because he stresses the immanence of the sublime, its empiricism (here referring to experience through the senses), the way it points to something within the subject. The experience is not transcendent. Consequently, the Burkean sublime precedes reasoning by 'arresting' the subject, focusing on the terror experienced by the subject. Conversely, for Kant (1914 [1790]:§27), the sublime 'enlarges', as it "makes intuitively evident the superiority of the rational determination of our cognitive faculties to the greatest faculty of our sensibility". Thus, Kant's argument is that Reason, thought, rationality and cognitive faculties can transcend or supersede the limits of sensory, empirical existence, removing the sublime from the empirical to the mind or Reason.

The idea of that there is a movement from the fearful feelings evoked by an object, to the negative pleasure experienced by a contradictory response – the inability to express or represent the feelings or thoughts, as well as the argument that there is a realisation that Reason may transcend fear of these objects – is mirrored in science fiction, which aims to arouse both wonder and fear, as unpacked later in the study. Importantly, it is not necessary to believe that either immanence or transcendence in the sublime is fully realised, just to consider its possibility and especially whether something, in this case, science fiction film, tries to evoke the sublime and/or whether a particular subject experiences the film as sublime. It may be argued that science fiction film expresses both elements of the Burkean and Kantian sublime. Moreover, this study will look at what Sobchack (2008:195) argues in relation to the cinematic sublime, which concerns both transcendence and immanence.

The iterations of the sublime that follow Burke and Kant move away from objects or forces of nature towards humankind's subjugations of nature through science and technology. Some versions of the sublime combine elements of Burke and Kant, like the idea of transcendence in immanence, while other versions, like the feminine or material sublime, subvert Kant. These are discussed in the next chapter.

CHAPTER 3: THE TECHNOLOGICAL SUBLIME AND OTHER MOVEMENTS

While both Burke and Kant's versions of the sublime can be applied to the study of science fiction film (which will be explored during the film analysis), science fiction is intimately linked with technology. Therefore, key components in understanding how the sublime is present in and is evoked by science fiction film, namely the emergence of the technological sublime and the subsequent cinematic sublime, are discussed in this chapter. This is to lay the foundation of the discussions of the films, *Interstellar* and *Tron: Legacy*. Reference is also made to the sublime as transcendence, as argued by Barnett Newman, as well as the feminine sublime as both iterations are relevant to the study of the film, *Under the Skin*.

3.1 The Industrial Revolution and the American sublime

Klinger (2009:92), as pointed out in Chapter One, argues that the sublime or at least, the discourse thereof, emerges during times of "crisis", which does not necessarily imply "decay or demise, degeneracy or decadence, but rather the dawn of a new era, the advent of a rule of renewed and heightened vigour". Therefore, during times of great change, whether political, ideological or technological, the sublime emerges as part of the transition.

The Industrial Revolution that occurred in the Western World from the mid-1700s to the mid-1800s represents such a time. During this period, large groups of people moved from rural to urban areas, while there were massive advances in technology such as the development of machines to make goods. The pilgrimages and large journeys into a foreign and 'untamed' land are ones in which white, 'civilised' Europeans triumphed over natural wilderness. The wilderness, that is, nature, had to be tamed, subjugated in the name of economic progress. In the 1893 essay, "The Significance of the Frontier in American History", the American historian, Frederick Jackson Turner (1861-1932), argues that the idea of the frontier is a cornerstone of American democracy. As Turner ([sa] [1893]:1) states, "The peculiarity of American institutions is, the fact that they have been compelled to adapt themselves to the changes of an expanding people to the changes involved in crossing a continent, in winning a wilderness, and in developing at each area of this progress out of the primitive economic and political conditions of the frontier into the complexity of city life".

Nye (1994:17,19) explains that by the 1820s, a distinctive version of the sublime had emerged in America, when tourists started flocking to natural wonders such as Virginia's Natural Bridge and the Niagara Falls. Nye (1994:20) uses late US president Thomas Jefferson's 1785 description of the bridge as an example of the sublime experience, in which Jefferson notes

the view from the height of the object as "'painful and intolerable, that from below is delightful in equal extreme'". The Niagara Falls were described by some as inducing a religious experience (Nye 1994:21). These encounters are a kind of rapture; arresting moments in which the subject feels awe and terror, pain and pleasure.

Previously, the sublime was characterised by individual experiences, by a lone subject. The American sublime, however, deviated from this, into something that could be experienced by a crowd, collectively, such as by a group of tourists. Nye (1994:27) states that "the presence of a crowd can enhance the interest in an object, confirming its importance. The psychology of the crowd creates additional meanings… The sublime soon became not the result of serendipity but rather a scheduled part of travel". Hence, the sublime moves away from being a matter of discourse in philosophy and the arts, and becomes more accessible, creating a kind of 'popular sublime'. However, at the same time, the sublime remained something ineffable. Being awestruck, amazed, astounded – the inability to express the sublime continued.

During this time the sublime also became politicised and nationalised by being a part of American identity. Both the natural wonders like the Niagara Falls and the technological feats like the Jefferson Bridge were national symbols. Nye (1994:36) states that those "who contemplated such public improvements [like bridges, canals, and railways] became aware of democracy and saw himself as part of the moral vanguard, leading the world toward universal democracy".

Another transformation in the character of the sublime is that "land was appropriated as a natural symbol of the nation while, at the same time, it was being transformed into a man-made landscape" (Nye 1994:37). This shift, the conquering of nature, is something that is explored in the science fiction genre as well.[16] Construction and feats of engineering allowed humankind to elevate itself, as 'masters' of the earth. As Klinger (2009:99) explains: "Modern science and technology enable us to comprehend the laws of nature and to domesticate the threats of certain natural phenomena like thunderstorms or floods, the powers of fire and water".

[16] In science fiction, nature is frequently subjugated through technology, often with disastrous consequences. One example is genetic mutation, whether of food or of humans themselves, which may result in catastrophe. For example, in the film *The Island of Dr Moreau* (John Frankenheimer & Richard Stanley 1996), a mad scientist splices together animals and humans. These hybrids later turn against their creator. In the film *Gattaca* (Andrew Niccol 1997) the rich and powerful are able to manipulate the genes of their children. This results in a dystopian society which sees a big class divide between those who are genetically superior and the poor, who cannot afford eugenics. An example of the consequences of destroying the planet is the film, *Soylent Green* (Richard Fleischer 1973,) in which the world has been ravaged by the demise of the ozone layer resulting in a dystopian society where most resources have dried up and poverty rages.

It is in the United States, during the American sublime, that the word or concept of "technology" was formulated. The word comes from two Greek words, *technē* and *logos*. *Technē* refers to an art, skill, or craft, and according to The Online Etymology Dictionary (Douglas Harper 2001-2016:[sp]), the Greek term *tekhnologia* refers to "systematic treatment of an art, craft, or technique"; its meaning as the "study of mechanical and industrial arts" is first recorded in 1859 and in 1902 the Century Dictionary gives examples of "spinning, metal-working, or brewing".

In 1777, German scientific author Johann Beckmann (1739-1811) became the first person to write about technology as a "systematic description of handicrafts and industrial arts" (Mitcham & Schatzberg 2009:37). In 1828, Harvard professor of medicine Jacob Bigelow (1787-1879), in the first English use of the term, described technology as "the labour of a hundred artificers [which] is now performed by the operations of a single machine… We accomplish what the ancients only dreamt of in their fables; we ascend above the clouds, and penetrate into the abysses of the ocean" (Nye 1994:45). While science and technology have strong links to each other in contemporary times, in 1828, there was a clear distinction between the two fields: Technology was about machines while science was concerned with "pure research", rather than about real-world application (Nye 1994:46).[17]

During industrialisation, Americans appeared to embrace technology, industrial development, and machines, while the English had the opposite reaction. Industrialisation was feared and demonised by the British. This is illustrated in literature, most famously in Shelley's (1797-1851) Gothic novel, *Frankenstein: or, The Modern Prometheus* (1818), mentioned in Chapter One and discussed further in Chapter Four. At the same time, the English author Charles Dickens (1812-1870) wrote about his horror at seeing railroads for the first time, comparing locomotives to monsters (Nye 1994:54). Those who came upon machines for the first time, "could not decode the experience into familiar categories of perception, and therefore they turned to the supernatural: dragons, monsters, or visions of hell" (Nye 1994:55).

Nye (1994:57) uses Kant's dynamical sublime to describe technologies like the railroad, the telegraph, and steamboats that appear to be "the triumph of machines… over space and time". However, Nye (1994:56) uses the term "arithmetical sublime" to describe the experience of

[17] The First and Second World Wars served to create the more contemporary understanding of the term "technology" and its relationship to science, which became "techno-science". Carl Mitcham and Eric Schatzberg (2009:39) explain that it was in the 1960s that "technology" came to have a triple meaning for scientists and engineers, referring to objects (products and devices), processes (skills and systems), and knowledge.

the construction of massive objects “whose scale and permanence made them appear to be triumphs over the power powers of nature”. This term relates to Kant’s mathematical sublime. While the Kantian sublime regards the inability of the imagination to represent the object of the sublime and the failure of Reason, the technological sublime is the materialisation of a newfound technologised and scientific form of reason. Nye (1994:60) argues “whereas in a sublime encounter in nature human reason intervenes and triumphs when the imagination finds itself overwhelmed, in the technological sublime reason had new meaning. Because human beings had created the awe-inspiring steamboats, railroads, bridges and dams, the sublime object itself was a manifestation of reason”. American politician and explorer, George Perkins Marsh (1801-1882) (quoted in Jürgen Martschukat 2002:903), told the *Christian Examiner* in 1860 that the “‘obedience to [nature’s] dictates… the law of all lower tribes of animated being, [but] it is by rebellion against her commands and the final subjugation of her forces alone that man can achieve the nobler ends of his creation’”.

Kant’s sublime is based on both the inability to comprehend and express that which is absolute and that which stuns the mind of the ordinary person. However, the awe is always temporary and this can be applied to the technological sublime, for example, the increasingly fast development of new technologies to replace ‘old’ ones. If there is a constant demand for ‘better’, ‘bigger’, and ‘faster’, the novelty value of the sublime, as created by technology, quickly fades. It is this fleeting characteristic of technology in which the sublime begins “[to presuppose] the ability to innovate continually and to transform the world. The technological sublime proposed the idea of reason in constant evolution” (Nye 1994:60). Therefore, the technological sublime is impermanent and temporary because it constantly looks to the future. In contrast, the sublime in nature is related to eternity. Again, the technological sublime has developed into an experience that is no longer an individual one, but of “communion, through the machine, of man with man” (Nye 1994:62). It serves to connect people instantly in the way the telegraphs first did, and the way in which mobile phones, the Internet, and social media now do.

The invention of electricity in the 1880s was perhaps the phenomenon that astounded society most. It appeared unnatural in its ability to create something forceful, seemingly out of nothing; something that could and would change labour, transport, agriculture and communication. Not only could electricity create light, this light could be used “artistically” to manipulate colour and manage shadows and highlights. As Nye (1994:151) states, “Spectacular illuminations combined the mathematical and the dynamic sublime as the spectator encountered both extreme magnitude and irresistible power”.

It is with the invention of electricity that Nye (1994:152, emphasis added) identifies yet another kind of sublime encounter: “Kant’s sublime made the individual humble in the face of nature, the technological sublime exalted the conquest of nature. The electrical sublime represented a third kind of experience, as it *dissolved the distinction between natural and artificial sites*. In blurring or even erasing this line, it created a synthetic environment infused with mystery”. Martschukat (2002:906) states that the transformation of electrical energy into light caused a stir because no longer was it “God alone who gave the world light; the awe and worship that had once been devoted exclusively to the deity and its representation in nature were now given to man-made technology”.

Similarly, contemporary and ‘invisible’ technologies such as the Internet and cloud services may be infused with mystery to those not involved in the creation of such. Furthermore, the visual representation of experiences like virtual reality, the codes used to run computers, the tapping into of modes of communication that cannot themselves be seen, the sub-atomic world and quantum physics, are enigmatic because they cannot be observed by the naked eye, though their effects can. These unseen technologies and sciences can only be represented through the imagination of the creator or artist.

One of the first ‘unseen’ technologies, electricity, inspired one of the first and most seminal of science fiction films, Fritz Lang’s *Metropolis* (1927), further discussed in Chapter Four. In an interview in 1965, the German filmmaker said “I first came to America briefly in 1924 and it made a great impression on me. The first evening, when we arrived, we were still enemy aliens, so we couldn't leave the ship. It was docked somewhere on the West Side of New York. I looked into the streets – the glaring lights and the tall buildings – and there I conceived *Metropolis*” (Metropolis Further Study 2010). Thus, the newly-lit cities with their skyscrapers and bridges became at once threatening and nightmarish, and yet, entrancing.

Of course, while buildings and bridges (usually) pose no danger to people, what is noteworthy in the American technological sublime is the beginning of the erasure of the distance mooted by Kant. Tourists could now stand far from the bridge, underneath a bridge or on the high bridge, anticipating the immersive experiences of virtual reality in the later technological sublime (discussed in the next section). Amanda du Preez (2009:210-211) uses the example of extreme sports, in which full immersion in a dangerous and potentially life-threatening event, becomes akin to a pseudo-sublime: “The closer the subject moves to the sublime, the more it is deemed an authentic extreme experience”. The building of a bridge over a massive gorge, for example, would allow a visitor a much more immediate experience of the dizzying

heights.[18] This kind of immersion begins to result in an erasure of boundaries as "immediacy causes the categories of subject and object/time and space to implode (Du Preez 2009:212)".[19]

Another element of the sublime present in the electrified landscape is its ineffability. Its meaning lies "precisely in the fact that it seemed to go beyond any known codification, becoming unutterable and ungraspable in its extent and complexity" while at the same time, the electrical sublime "eliminated familiar spatial relationship[s]" through its ability to cross massive distances (Nye 1994:196). The destruction of the spatial relationship can be compared to the "alienation" Leo Marx (2000:177) refers to, who employs Karl Marx to describe how machines could become and do become humankind's enemy by supplanting people as labour, in other words, separating subject from object, pitting humans against their own creations.

Therefore, the electrical landscape and more recently, the technological, digital and scientific landscapes, inspire reverence, wonder and even terror. The fear, however, is no longer of events of nature but a fear of the objects which humankind has created. Nye (1994:197) argues that this fear "emerges as an important part of the phenomenology of industrialised society", and by extension, the society of digital communication.

Moreover, as technologies and inventions developed at an exponentially increasing rate, changes occurred in what was considered sublime. During the Great Depression (1929-1930s), and World Fairs of the early twentieth century, new objects were exhibited, such as the aeroplane at the New York World Fair of 1939. During this time, the sublime moved from massive objects to the sale of an unknown, frightening, and wondrous future. The aeroplane became a symbol of human potential. As Nye (1994:202) argues, the aeroplane "violated the natural order, defying gravity and hurling a man so high he became little more than a speck against the sky. Flight [as a concept in itself] was sublime". This can now be extended to space exploration and flight. Despite the ability to postulate about new developments (and though some scientists and even science fiction writers have done so successfully), the future is inherently unpredictable and therefore, it is not possible to completely express it. Because it cannot be known, the future is something to be feared, but simultaneously this is experienced at a distance because the subject (human) is stuck in the present. It is this fear of the unknown that science fiction taps into, as will be discussed in the next chapter.

[18] In contemporary times, this kind of immediacy and immersion could, of course, be achieved by jumping off the bridge in a bungee jump rather than standing on it.
[19] The erasure of boundaries is a key theme in science fiction and is discussed further in Chapters Five and Six.

Finally, Nye (1994:282) links the development of technological objects (and hence the technological sublime) to consumerism, particularly for Americans, during which

> the subject elides Kantian transcendental reason with technological reason and sees new structures and inventions as continuations of nature. Those operating within this logic embrace the reconstruction of the life-world by machinery, experience the dislocations and perceptual disorientations caused by this reconstruction in terms of awe and wonder, and, in their excitement, feel insulated from immediate danger.

In the next section, the development of the American technological sublime into a more contemporary technological sublime that involves science, biology, and digital developments, is examined.

3.2 The (bio)technological, digital and contemporary sublimes

Professor in Philosophical Anthropology, Jos de Mul (2012:35), makes the jump from the American technological sublime to the (bio)technological sublime of contemporary times, by showing that their concerns are similar, that is, that the "[m]odern man is less and less willing to be overpowered by nature; instead, he vigorously takes technological command of nature". Like the Kantian sublime, the technological sublime[20] contains two bipolar and yet inextricably linked elements. As Nye (1994:285) explains, this contradiction "invites the observer to interpret a sudden expansion of perpetual experience as the corollary to an expansion of human power and yet simultaneously evokes the sense of individual insignificance". Therefore, the technological sublime is able to evoke wonder at the capabilities of humankind as a whole and at the same time, be capable of feeling an individual sense of being overwhelmed and small in comparison.

Ironically, the technosublime might not be a rejection of, or a move away from the natural sublime after all. While science and technology may be seen as ways in which to tame or subjugate nature, the laws of physics, that is natural laws, are used to do so. Furthermore, the biotechnological sublime is concerned with the very building blocks of nature. This is supported in the statement by De Mul (2012:33) that in "the age of biotechnologies (such as genetic modification and synthetic biology)… the sublime seems to regain a natural dimension. Mediated by biotechnologies nature becomes a 'second' or 'next nature'". Mountains and overhanging rocks might no longer be the objects of the sublime, but natural laws are used in the evocation of the contemporary technological sublime.

[20] The technological sublime is also referred to as the technosublime by scholars including J Gilbert-Rolfe in *Beauty and the Contemporary Sublime* (1999) and Barbara Bolt in *The Techno-Sublime: Towards a Post-aesthetic* (2007).

The technological sublime is interpreted as something that can be both negative and positive. Firstly, technology and science are viewed as something that may be beyond human control, such as the fear that the development of Artificial Intelligence (AI) could surpass human potentiality and as such, overrun the world. Conversely, technology and science can be viewed as things that not only assist humankind but liberate and propel the world forward; such ideas are considered democratic, as mentioned by Nye in the previous section. Rob Wilson (1994:223) states that "cybernetic networks... have no point of origin nor measure of political identity". Therefore, he argues that there is a kind of freedom inherent in certain technologies, in this case, the networks (such as the Internet) that connect computers and other machines. But, the application or use of technology is not apolitical, regardless of the intentions of its creators. Technology – especially as referring to industrialised machines and devices, as well as access to communication and information – is part of a systemic and skewed power-relationship between the developed and developing world. A lack of access to any of these technologies prevents dissemination of information and can be used as a political tool. For example, cutting off access to social media prevents dissenting groups from gathering and organising. Therefore, technologies are as able to restrict freedoms as they are able to enact freedoms.

American literary critic and Marxist political theorist, Fredric Jameson (1997:35), describes technology as a something that

> designate[s] that enormous properly human and anti-natural power of dead human labour stored up in our machinery – an alienated power, what Sartre calls the counter-finality of the practico inert, which turns back on and against us in unrecognizable forms and seems to constitute the massive dystopian horizon of our collective as well as our individual praxis.

Therefore, the fear of technology can be seen as the alien "Other" – that which is terrifying because of the inability to represent and describe it, combined with the fear of loss of control. Jameson (1997:37) uses the example of the computer as something "whose outer shell has no emblematic or visual power…, carrying its flattened image surface within itself", saying "such machines are indeed machines of reproduction rather than of production". Hence, there is a kind of falsehood in certain objects of technology; they claim to represent something real, but, in fact, do not. The cinema and the computer are both examples of this. This relates to Jean Baudrillard's (1988:[sp]) theory on simulation and simulacra, when he states:

> It is no longer a question of imitation, nor of reduplication, nor even of parody. It is rather a question of substituting signs of the real for the real itself; that is, an operation to deter every real process by its operational double, a metastable, programmatic, perfect descriptive machine which provides all the signs of the real and short-circuits all its vicissitudes.

The images seen on a cinema screen may look like they represent fact, or something actual or 'real'. But even without animation or any special effects, film (and similarly, television), is a series of simulacra. The images are imitations, substitutes and stand-ins. Furthermore, the computer screen is a *representation* of data, a binary series of ones and zeroes made manifest in a visual and accessible way. The computer is itself a machine of reproduction.[21] These failures, i.e. the inability to present and the ability only to represent, characterises the contemporary technological sublime. The way in which art attempts to represent these simulacra is explored further during the analysis of *Tron: Legacy*.

The idea of the sublime as unrepresentable also draws from theories concerning the modernist and postmodern sublime. In his 1957 statement, *The Sublime Now*, artist Barnett Newman rejects European art's concern with beauty, and with imagery of figures and objections. Newman (2010:27) argues that American artists (at the time of writing) were free "by completely denying that art has any concern with the problem of beauty and where to find it". This echoes Kant's distinction between beauty and the sublime.

Newman's own paintings illustrate this argument. Many of his works are created by first placing tape on a massive canvass over a flat colour, painting around it before removing the tape to create a 'zip' which reveals the original colour underneath. These are creations of images "whose reality is self-evident and which are devoid of the props and crutches that evoke association with outmoded images, both sublime and beautiful… Instead of making cathedrals out of Christ, man, or 'life', we are making them out of ourselves, out of our own feelings" (Newman 2010:27). For Newman, the rejection of and escape from clear figurations and patterns, that favour new experiences, speak to the unrepresentable nature of the sublime.

Newman's painting, *Vir Heroicus Sublimis* (1950-51), is an example of this (Figure 1). The Latin title means "Man, heroic and sublime". The 2006 MOMA gallery label reads: "Newman hoped that the viewer would stand close to this expansive work, and he likened the experience to a human encounter: 'It's no different, really, from meeting another person. One has a reaction to the person physically. Also, there's a metaphysical thing, and if a meeting of people is meaningful, it affects both their lives'" (Barnett Newman 2018:[sp]). Thus, as White (2009:103) argues, the modern sublime is about a "moment of presence – without

[21] A computerised machine may be viewed as a tool of production but it is a tool that is created, at its origin, by a human and its data input or programming allows the machine to produce something. Advances in computer science increasingly lean toward computers that are able to produce or manufacture without human input, that is, through Artificial Intelligence, though at the time of writing, this is not yet a reality.

representation of another, external time or place to that of the encounter of the artwork" and "through the encounter between the viewer and the direct materiality of the flat, non-representational surface of the picture". At first glance, what this "moment of presence" seems to indicate is an experience of immanence. The religious philosopher, Mark Taylor (1992:89), argues that Newman's decision not to frame his work allows the "viewer and painting to become one", stating that to "experience the perfect union of subject and object is to enjoy the sublime".

Figure 1: Barnett Newman, *Vir Heroicus Sublimis*, 1950-51. Oil on canvas, (242.2 x 541.7 cm). Museum of Modern Art, New York.
(MOMA website 2018a).

It is necessary at this point to clarify what is meant by immanence and transcendence, often seen as dialectical concepts. The etymology of both terms is rooted in religion and concerns people's relationship with the divine or God. The *Encyclopaedia Britannica*'s simple explanation is that "[t]ranscendence means going beyond a limit or surpassing a boundary; immanence means remaining within or existing within the confines of a limit" (Religious Experience 2018:[sp]). Ergo, in religion, immanence views God as being within the world, while transcendence views God as being separate from or outside the world. As Jack Voller (1993:18) states, "the tradition of the sublime is, at its heart, a tradition of spiritual inquiry, an aesthetically grounded quest devoted to recovering intimations of the divine". However, transcendence or immanence as related to the sublime, does not necessarily only refer to the God of religion, but also to the mystical, the spiritual, the divine – feelings of going beyond the self. As Morley (2010a:[sp]) argues, the core of the sublime is about experiences of "self-transcendence that are beyond the narrow epistemologies provided by a scientific and

naturalistic world-view". Art (or as is argued in this study, cinema) is one way where "self-transcendence" can be found.[22]

The flat colour of Newman's work, the "Being-Nothingness… can be experienced only in the immediacy of the present as the immediacy of presence" (Taylor 1992:90). This would again seem to indicate that the abstractions in Newman's paintings are about immanence. But, the contrast of the zips to the flat colour works to bring forth another dimension, that of transcendence. Jeremy Gilbert-Rolfe (2010:136) argues that Newman's paintings are about the idea of limitlessness because the "present colour without form" points to "the possibility of formlessness, an emptiness which is at the same time full" through using "indeterminacy".

Paul Crowther (1985:56) explains that "the implied analogy [in Newman's paintings] is that just as the zip is properly defined and comprehensible only through its opposition to the colour-field, so humankind can only define and express its own finite rational nature in opposition to the infinite and unknown". The science fiction sublime is often concerned with something akin to Newman's "zip", the gap which contrasts the flat colour-field of the rest of the canvass, and which becomes the vehicle for sublime transcendence. Scenes in which people are figured against all-white backgrounds, making them appear as if they are 'floating' in George Lucas' *THX 1138* (1971), recalls Newman's paintings of almost pure white, in representing the encounter between the physicality of the cinema screen and the audience. However, it may be noted that Newman's idea of the sublime could be seen as reductionist, as trying to create a 'formula' for the sublime. This is problematic because, as previously argued, the sublime is ineffable.

Morley (2010a:[sp], emphasis added) argues that "the contemporary sublime is mostly about *immanent* transcendence. That is, it is about a transformative experience understood as occurring within the here and now". Hence, the experience of the contemporary sublime is one that goes against cause and effect. The feeling of the sublime is experienced in the present, even as the subject observes or experiences the object which recalls the sublime, such as a work of art or a film. The feeling of the sublime is not deferred but may 'ground' the subject or viewer in the present. Be that as it may, while the subject experiences the sublime in the present, the experience can only be interpreted or made sense of afterwards through language (understood in its broadest sense), thus the experience is always mediated again, for example, through the canvass or the screen.

[22] Whether transcendence of the self is truly possible is arguable, but what is possible is a *belief* or rather the affective experience by the subject that this can occur and has occurred.

The concept, “immanent transcendence” may appear paradoxical and illogical. However, Morley (2010a:[sp]) explains that immanent transcendence can happen in two ways:

> One strives to re-envisage the self as existing in the light of some unnameable revelations arising in a gap that exists between, on the one hand, a socially-constructed and alienating reality, and on the other, unmediated awareness of life,… [while the other direction is] more motivated by a resigned sense of inadequacy… [which] addresses our emotional, cognitive, social and political failure when faced with all that so blatantly exceeds us.

The gap Morley refers to can be compared to the gap or zip that Newman’s painting contains. Furthermore, as Taylor (1992:70) illustrates by using various examples in modernist art, the “development of non-objective painting represents a further movement away from materiality and toward spirituality”. The movement toward spirituality is transcendent.

However, if the sublime is unrepresentable as previously argued, and there is a mediated exchange between the artwork and the viewer, the question arises whether there really can be any experience of the sublime. Considering cinema, Sobchack (2008:196) argues, as stated in Chapter One, that viewers are “embodied and sensual beings”, with movies ‘touching’ viewers through the senses that are stimulated by what is happening on screen. Therefore, it may be possible that even though the sublime is unrepresentable, a subject may interpret or experience the *attempted* representation as sublime. Moreover, as Morley (2010a:[sp]) argues, with the contemporary sublime there is a striving by the subject – the viewer – to “re-envisage the self” in a gap. The sublime is not located *within* an object, which rather *evokes* the sublime. Instead, the sublime concerns the self and therefore, when the sublime is encountered, there is a sense of transcendence experienced by the self, however momentary. Nonetheless, because the subject is always embodied and located in the present (even if the subject *feels* disembodied and transported), there is a pull-back towards immanence. Therefore, Morley’s version of the contemporary sublime, immanent transcendence, goes further than Kant, instead incorporating elements of both Kant and Burke.

Nevertheless, whether self-transcendence is truly possible or not, the feeling or belief that it is happening is what matters to the subject. David Morgan (2010:82-83) states that transcendence regards “a mystery present in the work of art as the encounter with a metaphysical order beyond or hidden within the ordinary, sensuous world”, that for the idealist is “aimed at union with the divine, elevation to a mystical wholeness, and identity with the cosmic all”. Furthermore, in an interview with Shiraz Houshiary (2010:94, emphasis added), the curator and art critic, Stella Santacatterina, states that “the mystical dimension is when knowledge is not used to construct the self as identity in terms of nationality, cultural context

or gender, but to go *beyond the self*, where the reality of daily life is forgotten or rendered dormant". This negation of daily life does not have to be a permanent state. In art, it is but fleeting, for example, while there is no mention of the fear of danger, which is seminal to both Burke and Kant's iterations of the sublime, in Santacatterina's comment, there is a sense in both the Burkean and Kantian traditions of moving beyond oneself, to something incomprehensible.

Even though a painting and a cinema screen provide only mediated exchanges, the experience of the sublime may be possible because that experience goes beyond representation (and in the case of the sublime, the failed representation). As Jean Fisher (2010:89, emphasis added) argues, visual art is fiction, a "'veil', which again, means 'nothing' in itself since, surely what it conceals is no more than art's own fictionality. Its value for the perceiver lies in its power to activate and organize the movement of desire: *in our desire to know what is behind it*, imaginative thought and knowledge are engendered". While Fisher's rejection of the material form of art may be problematic – after all, the work exists for the viewer in the present – what is important is a desire to know what is behind or beyond it, i.e. a striving for transcendence, for an awareness of what is on 'the other side' of the artwork.

The Russian mystic, PD Ouspensky (in Taylor 1992:79-80) postulates how human consciousness heads towards infinite awareness, recalling Kant's dynamical sublime:

> It is the idea of infinity, the fact of infinity… [that will] inevitably happen to a man approaching an understanding of a higher order of reality. But what will he feel under such circumstances? He will sense a precipice, an abyss everywhere, no matter where he looks; and experience indeed an incredible horror, fear, and sadness, until this fear and sadness shall transform themselves into the joy of sensing a new reality.

The zips in Newman's paintings are examples of the "infinite awareness" and it is this infinity that may be viewed as transcendent, while the flat colour surrounding it may be immanent. Therefore, there may be, as Morley argues, an occurrence of the sublime through immanent transcendence.

Returning to Morley's argument that the contemporary sublime is a re-envisaging of the self, science, as present in the technological sublime, also concerns the self, albeit what may often be perceived to be a loss of self. The technological sublime is described as the "'growing alienations of our minds from our bodies in an information society where we spend ever greater amounts of our lives sitting in chairs, staring at a screen'" (Dery in Landon 2000:295). The screen may refer to the television screen or the computer screen. The latter indicates the development of a branch of the technological sublime, namely the digital sublime, which refers

inter alia to technology around computers and communication like the Internet and smartphones. One of the best examples of the digital sublime considers cyberspace (one of the most important concepts and plot settings in science fiction). In his book, *The digital sublime*, Vincent Mosco (2004:13) states that "cyberspace is a mythic space, one that transcends the banal, day-to-day worlds of time, space, and politics". It is mythic because it appears to transcend the everyday. As Mosco (2004:32) later argues, cyberspace "embodies the sense of betwixt and between (or, more formally, what cultural theorists call liminality)". However, as much as cyberspace seeks to erase distance there are still boundaries between the subject and object.

The tools of cyberspace – the computer, smartphone and smart appliances – have provided humankind with the ability to 'plug into' technology and connectivity almost anywhere, at any time. And yet, there is still an alienation to this plugged in-ness: A distance or space between the object (for example, the Internet) and the subject (the user). Thus, complete immanence is not possible due to the mediated nature of connectivity and reality. While a technological, scientific, or digital object may be a vehicle for immersion (such a bodysuit for Virtual Reality), the object inherently throws up a 'wall' between the subject and total immersion, even though the subject might be unaware of this wall. There is, therefore, an illusionary sense of immanence due to the gap that exists between the subject and the sublime. The quest for total or complete presence in immanence is rather mythical and will inevitably fail, though an experience of embodied immanence may be possible.

However, as argued by Morley, the sublime experience also concerns transcendence and this too can be found in the technological sublime. Phil Chidester (2012:98) proposes that the kind of sublime experience created by technology is "the product of the relationship between subject and object, a relationship that defies representation and therefore provides the 'excess of experience' that is the hallmark of the sublime encounter". Furthermore, Morley (2010a:[sp]) argues that the sublime experience has moved to a "new world, beyond the limits of the physical body and of time and space", that is, something transcendent. Technology affirms the complexity of reality and highlights its mediated nature. This mediated reality is evident in the cinematic sublime and is not only experienced by the audience but is something that is also present in the themes of science fiction film itself. Istvan Csicsery-Ronay (2008:161) states that the "sf sublime emphasizes the dramatic arc of the technosublime: Recoil at the unutterable power and extension of technology, and recuperation through ethical judgments about its effects in the future".

3.3 The cinematic sublime

The cinematic sublime is, in part, an extension of the technological and digital sublimes. The first moving pictures – in which human motion was reproduced – were shot in the 1890s. This happened at the height of the American technological sublime. Short, black-and-white documentaries of 'ordinary' scenes (a street vendor, a man watering his garden, men playing cards) were screened to the astonishment of audiences. An urban legend describes how screaming viewers reacted with terror while watching filming pioneers, Auguste and Louis Lumière's short film, *L'arrivée d'un train en gare de La Ciotat*, also known as "The Arrival of the Mail Train", or "Train Pulling into a Station". Regardless of whether this is true or not, from its very inception, film elicited an emotional response from audiences. Bukatman (1995:264) states that cinema is itself a special effect: "The illusion of motion, with its consequent sensations of temporal flow and spatial volume, provided enough innovation for [early] spectators already familiar with a range of spectacular visual novelties". The special effect, in turn, affects the subject.

Nye (1994:153) argues "[w]hereas Kant had expected the individual to draw the correct transcendental conclusion from a sublime encounter with nature, the electrical sublime produced awe on demand". While the visual format of cinema is no longer a novelty, there are constant innovations that attempt to create awe-struck experiences. Digital screens, 3D filming, IMAX, surround sound, CGI (Computer Generated Imagery), new kinds of shots for action scenes, and research into 4D experiences (that would include tactile, olfactory, and even taste) are ways in which filmmakers are trying to create new immersive encounters. Hence, the sublime experience (in this case as related to cinema) is not "merely a matter of vision; all the senses are engaged… although the eye was often dominant, movement, noise, smell, and touch were also important" (Nye 1994:285). Subsequently, when the five senses are engaged or stimulated, the experience becomes more entrancing, captivating and immersive.

Accordingly, Pajaczkowska (2009:239) states that CGI is closely affiliated to "Kant's concept of the mathematical sublime with its endless multiplication of units, and to the cinematographic techniques for generating the awesome". However, the cinematic sublime is not only found in the technical aspects of the cinema, the film itself – that, is the plot, cinematography, and special effects – may also produce this feeling of awe, which will be illustrated in the discussions on science fiction as a genre (Chapter Four), as well as the discussion of the sublime in science fiction film (Chapter Five).

The cinematic sublime contains similar contradictions inherent in other forms of the sublime like immanent transcendence (discussed previously). Chidester (2012:99, emphasis added) states that there is a "relationship between the viewing subject [cinema goer] and the viewed object [the screen] – a relationship that disengages the individual viewer from an active sense of self by offering an experience that is *beyond representation*, that is in excess of any effort to reproduce it in symbolic terms". Depending on the efficacy of the film – that is, whether the viewer is 'engaged' by the plot or the visual effects, or 'disengaged' through ennui – there is a visceral interaction between the subject and object. Furthermore, the attempt to move beyond representation – that which is on the screen – relates to the pursuit of transcendence represented in the zip paintings.

Sobchack (2008:196) describes the subject in a movie theatre as "cinesthetic" which "refers us to and embodies cinema – a medium that itself technologically appropriates modes of embodied existence (seeing, hearing, directed and purposeful physical and reflective movement)". Furthermore, a similar argument to Morley's conflation of two kinds of the sublime, namely immanence and transcendence, can be made in the cinematic sublime. Sobchack (2008:197) states that in the dark theatre,

> as lived bodies we are always grounded in the radical materialism of bodily immanence, in the 'here' and 'now' of our sensual existence… However, as lived bodies, we always also have the capacity for transcendence… that locates us 'elsewhere' and 'otherwise' even as it is grounded and tethered to our lived body's 'here and 'now'.

There is, therefore, another paradoxical experience (a characteristic of the sublime) that occurs in the body of the viewer or subject because the lived body is always (inherently) grounded in the present experience. However, the viewer also has the ability to experience transcendence, for a "unique exteriority of being – an ex-stasis". Hence, a continuous exchange is happening between the subject and object. The viewer is an embodied subject and at times during a film may be acutely aware of being in a cinema watching something at a certain distance on a screen. However, during a certain part of the film, whatever is happening on the screen causes the viewer to 'move away', to be taken out of themselves to a state of awe and rapture that may cause the subject to feel disembodied. The viewer may then move back again to a feeling of being in the present, in the 'here and now'. Therefore, there is a repeated flow of displacement that can take place, one that may be represented by the chiasm(us).[23]

[23] In biology, the chiasm refers to the area where two chromosomes intersect. In philosophy, the term was used by Maurice Merleau-Ponty to the intertwining or intersection of two aspects, such as in "embodied subjectivity" which is "never located purely in either our tangibility or in our touching, but in the intertwining of these two"; thus, the chiasm is "an image to describe how this overlapping and encroachment can take place between a pair that nevertheless retains a divergence" (J Reynolds [sa]).

For both Kant and Burke, the sublime is something that must be experienced at a distance. But somehow, cinema breaks through this barrier by evoking both an ontological state of bodily groundedness (immanence) and at the same time taking the subject beyond the present (transcendence). In yet another paradox, the cinematic sublime provides this experience not through presentation but *re*-presentation. The cinematic sublime is not 'real'; it is fiction but it still evokes responses that feel real, even though these responses are triggered by a 'false' experience, such as that provided by special effects. This may in effect even be a kind of virtual experience, particularly with 3D glasses, surround sound and a moving cinema seat. Žižek (1989:230) argues that the sublime is the "paradox of an object which, in the very field of representation, provides a view, in a negative way, of the dimension of what is unrepresentable". The very act of trying to represent the sublime in an object like film, highlights the fact that it is unrepresentable, that is, the sublime cannot be truly expressed or shown, just evoked in a feeling that cannot be quite named or reduced to an image which is not a 'true' representation.

Chidester (2012:101-102, emphasis added) highlights yet another contradiction of the sublime in the experience of mass media (which for the purpose of this study, can be used to refer to film): "As a vital form of transcendence, the sublime somehow manages to make subjectivity and objectivity function together. Those who find themselves in a sublime moment are invited to experience themselves as distinct individuals while becoming lost *through an immersion in the divine*, in that which defies easy conversion into symbolic thought or expression". As argued earlier, the sublime resides at a point where the relationship between signifier and signified breaks down. This is evidenced by Jonathan Crary (in Bukatman 1995:259, emphasis added) in his consideration of kineticism (the predecessor of film) in the nineteenth century in which "visual experience was 'given unprecedented mobility' that was '*abstracted from any founding site or referent*'". This again refers to the inability to truly represent the sublime.

However, the mediation of the 'message' between the object (film) and subject (viewer) by a screen, does not mean a sublime experience cannot be evoked as a feeling. Žižek's three modes of the 'real' can be applied to illustrate the relationship between subject and object and where the sublime lies. Žižek divides Jacques Lacan's theorisation of the 'Real' into three approaches. Žižek (1989:182) explains there is the 'real' "Real – the brute, pre-symbolic reality which always returns to its place – then the symbolic order which structures our perception of reality, and finally the Imaginary, the level of illusory entities whose consistency is the effect

of a kind of mirror-play – that is, they have no real existence but are a mere structural effect". Chidester (2012:103) argues that it is the third, the "Imaginary" Real, which contains traces of the sublime, because it is an experience that "through its uniting of material and symbolic, is compelling precisely because of its inaccessibility to pure language". Furthermore, Žižek (1989:193-194) states the imaginary relation is when "the two poles of opposition are complementary; together they build a harmonious totality; each gives the other what the other lacks – each fills out the lack in the other (the fantasy of the fully realised sexual relationship, for example, where man and woman form a harmonious whole)". The mirror-play may refer to how two opposite ideas and feelings such as immanence and transcendence reflect one another and play off one another.

The sublime cannot be discussed without positing binary opposites next to one another: Pleasure and displeasure or the material and the symbolic, side-by-side. This is because it is within the chasm or gap between binary opposites that one may find the sublime. Žižek (1989:229) illustrates this when he states that the paradox of the sublime is when

> [T]he gap separating phenomenal, empirical objects of experience from the Thing-in-itself is insurmountable – that is, no empirical object, no representation [*Vortellung*] of it can adequately present [*darstellen*] the Thing (the suprasensible Idea); but the Sublime is an object in which we can experience this very impossibility, this permanent failure of the representation to reach after the Thing. Thus, by means of the very failure of representation, we can have a presentiment of the true dimension of the Thing.

In the cinema, this is illustrated in the gap that exists between the material object: The screen, and the subject: The viewer. Furthermore, and similarly, there is in film a gap between signifier (the visuals depicted on screen) and signified (the interpretation by the viewer of what is seen). The gap, however, is not insurmountable. The sublime is what connects signifier and signified or material and symbolic. Sobchack (2008:198, emphasis in original) refers to a "mimetic exchange with cinema's own sensuously enabled figuration [in which] both our sense of bodily transcendence and the sensuality of our bodily existence are often *amplified* at the movies – rather than *reduced* by cinema's supposed lack of a full sensorium". The expression of the sublime in a cinema theatre (a place) and film (a medium) can be enhanced by special effects, which are often an integral part of science fiction film. Bukatman (1995:255) uses the example of science fiction film to describe how special effects help to provide experiences of the sublime by arguing that "cosmic displays… [address] the perceived loss of cognitive power experienced by the subject in an increasingly technologized world". The way in which special effects evoke the sublime is explored further in Chapter Five.

The moments in which physical existence are amplified may even result in a temporary experience of feeling completely immersed. Paul Coughlin (2000:[sp]) states that, for example, an explosion on screen contained within a rapid sequence of shots results in what Leo Charney (cited by Coughlin 2000:[sp]) calls a "'…split between sensation, which feels the moment in the moment, and cognition, which recognises the moment only after the moment'". The medium of film itself may be described as ineffable in that it is "transcendence never fully realised" because "the process of provoking, frustrating, and reanimating spectatorial desire for an elusive connection – whether with the auratic, with an existentially deep aspect of reality, or with some form of transcendence – may be understood as characteristic of film's capacity to mediate between material and immaterial dimensions of reality" (Pence 2004:45).

Transcendence is also not fully realised because of temporal limits: The film ends and with it, suspension of disbelief. Film creates a promise of transcendence in immanence – a promise that not only will the viewer be immersed and 'made present' by overwhelming and seemingly realistic visuals and sound, the viewer will somehow 'rise above' and be transformed by accessing something higher, by being granted entry to something beyond the mundane through the hyperreal. This 'promise', i.e. that the viewer will be given access to the divine, is created by disrupting the self, something that cinema does through its visual and auditory characteristics.

Annette Kuhn (1990:7) argues that science fiction film often uses the spectacle of special effects, like sound and 3D, to "temporarily interrupt the flow of the narrative, inviting the spectator to contemplate, with awe and wonder, the vastness of deep space, or the technological miracles of future science", linking such devices to the sublime. But despite technological advances in cinema, such as 3D, it may be argued that the novelty has worn off, becoming part of the consumer sublime. Nye describes this as a culture in which "special effects are created solely for entertainment. Their epiphanies have no referents; they reveal not the existence of God, not the power of nature, not the majesty of human reason, but the titillation of representation itself". The journey from awe to banality is described by Annie van den Oever as "ostranenie"[24] in which viewers become accustomed to new ways of seeing through a "defamiliarised trope", which then becomes familiarised and has to cyclically and continuously be replaced by new defamiliarised tropes (Jeffries 2009:198). Van den Oever (2010:35) refers to how cinema itself was strange and uncanny in the first few decades of its

[24] Ostranenie is a concept used by the theorist Victor Shklovsky during the Russian literary movement of Formalism, that has a double meaning: "making strange, and pushing aside" (Ostranenie 2018). The word as used by Shklovsky was misspelled, missing an "n".

inception. In cinema, banality can therefore be overcome by placing the focus on the subject matter of the film rather than just on the visceral experience of the film through special effects.

Another way in which to overcome ostranenie is through the uncanny[25] sublime. Sigmund Freud's 1919 theory traces the term to the German word *Unheimlich*, which is the exact opposite of familiar and known, the opposition of the word for "homely". What is needed to evoke the uncanny is firstly, to repeatedly recognise something known, "which has become alienated from it only through the process of repression" (Freud 1919:241). Freud (1919:249) states that it is easier for the uncanny to appear in fiction rather than in real life. Hence, science fiction presents an opportunity for the uncanny to occur as there is a recognition of some familiar objects, situated in unknown settings. Furthermore, Freud (1919:244) argues that

> an uncanny effect is often and easily produced when the distinction between imagination and reality is effaced, as when something that we have hitherto regarded as imaginary appears before us in reality, or when a symbol takes over the full functions of the thing it symbolizes, and so on. It is this factor which contributes not a little to the uncanny effect attaching to magical practices.

According to Scott Wilson (2013:38), the uncanny is like the sublime in cinema in that it is "product of the subject in relation to an experience or an object and, like the sublime, the uncanny stands in a problematic relationship to the possibilities of representations, not least of which because the uncanny object (much like cinema itself) is always-already a representation (of the vanished, remembered of original [homely] object or situation)". SF, in particular, relies on the uncanny to evoke the sublime by allowing for a comparison of something as it was in the past with something as it is in the present or future, like seeing older objects in technology in the future in a dystopian setting or seeing trees growing on Mars or seeing a car that flies. There is a gap between the subject (viewer) and such objects because of the complicated possibilities of representations Wilson refers to. One such complication is cinema's ability to disrupt time, both on the screen (stories do not play out in real-time) and in the cinema itself, if the viewer is unaware of time passing.

Therefore, there may be a double evocation of the sublime in film. There is the interplay between connectedness and disconnectedness of the screen in the cinema and the viewer. At the same time, connect/disconnect is also a theme in the genre of science fiction. Michael Thomas (1999:5) states

> Confused, terrified, and yet fascinated, we have – despite a spatial and often emotional remoteness – become wired to the technoscope of media spectacles by television and so-called new communication technologies: For [American

[25] Uncanny refers to something that is "[s]trange or mysterious, especially in an unsettling way" (Uncanny 2018:[sp]).

> critic Hal] Foster, this dis/connection has reached a new level of pain-and-pleasure and presents for the author 'a partial return of a fascistic subjecthood'.

A feeling of disconnectedness is present in the science fiction themes of alienation and in technophobia, both of which are discussed further in Chapter Five.

3.4 Subverting Kant: The feminine and material sublime

While the cinematic sublime combines elements of both Burke (immanence) and Kant (transcendence), there have also been other attempts to subvert Kant's sublime, which concerns a disembodied self. One of these is the feminine sublime, which is a direct offensive on the Enlightenment philosopher's views on aesthetics. The feminine sublime becomes a way in which to disrupt the status quo and destroy the roots of the sublime which, like Kant and Burke, posit women as unable to possess the high insights or intellect to access the sublime, relegating women to the notion of beauty. Not only do Kant and Burke assert that women are separate from the sublime, beauty is seen as a weakness.

However, the feminine sublime is not necessarily concerned with just women as such. Barbara Freeman, in *The feminine sublime. Gender and excess in women's fiction* (1997:2), argues that the feminine sublime is "neither a rhetorical mode nor an aesthetic category but a domain of experience that resists categorization, in which the subject enters into relation with an otherness – social, aesthetic, political, ethical, erotic – that is excessive and unrepresentable". Freeman (1997:10) uses the term 'feminine' to refer to the social constructs that are the foundation of the term, as well as resistance to patriarchal hegemony.

Freeman seeks to explore what the feminine sublime *signifies* rather than creating a rigid definition that delineates and excludes. The feminine sublime is a "site of passage and border crossing in which meanings collide and transform one another, an ongoing process of re-metaphorization in which we may perceive, in Judith Butler's wonderful phrase, 'the movement of boundary itself'" (Freeman 1997:10). Therefore, the feminine sublime seeks to blur boundaries, or at least, bring them together in order for a "crossing" to take place. Joanna Zylinska (2001b:[sp]) states that the feminine sublime concerns respect:

> The alterity of the other, both fascinating and threatening to the unity of the self, is the starting point of the ethics of the feminine sublime. Opening oneself to the alterity of the other is a highly ethical gesture. The self no longer remains 'at certain distances' from its source of enticement and fascination, but rather embarks on a fearful encounter with the other who poses a threat to its integrity but also offers a promise of bliss.

Hence, if the masculine approach to the sublime is to "master, appropriate or colonise the other", the feminine is one that respects the Other (Freeman 1997:11). Kant posits Reason as masculine and imagination and beauty as feminine, with the former having to overcome the latter in order for the sublime experience to take place. There is a certain violence perpetrated by Reason (masculine) against imagination (feminine) resulting in the negative pleasure that characterises the sublime, the subjugation of imagination by Reason, a relationship of dominance and submission.

Furthermore, as with other iterations of the sublime, the feminine sublime concerns boundaries and binary opposites, in this case, the material and immaterial. Du Preez (2010:396) describes the material sublime as offering "an ontologically engaged and phenomenologically contextualised encounter with overwhelming materiality that differs considerably from the predominant epistemological classical sublime…", an "'other' to the classical sublime, reminding it of its own corpo(real)ity". Lived bodily experience creeps up in the cinematic sublime but also the feminine sublime, with the latter's emphasis on considering how women's bodies are portrayed in artworks like films that evoke the sublime, or how women are shunned because they represent the corporeal while men represent, for Kant, Reason. The feminine sublime does not attempt to overlook the body by transcending the object that has evoked the sublime, but rather to incorporate it into the experience of the sublime. Zylinska (2001a:31) states the "feminine sublime does not domesticate the object that might be a source of threat but rather accepts the amorous relationship of pleasure and pain, and life and death, and the potential dispersal of the self". The feminine sublime, then, is one that can accept the argument of dialectical opposites postulated by Morley (immanent transcendence) or Sobchack (transcendence in immanence).

Corpo(real)ity and phenomenological encounters are seen in the language and images used to portray women in science fiction film, which necessitates the mention of the feminine sublime in this study. Visceral terms like "monster", "mother", "body", "birth", "bleeding", "eroticism" and "disgust" are found in various SF texts like, for example, in *Frankenstein*, in which the male doctor/scientist gives 'birth' to the creature, a conflation of the monstrous to birth, which is a woman's biological experience. Freeman (1997:88) states that "this both resemble[s] a misogynistic conception of the pregnant female body, which is viewed as unsightly and distorted when its customary borders are stretched and displaced".

The depiction of the female body is crucial to discussions about the feminine sublime in film, particularly science fiction film. Firstly, the female body is subjected to the male gaze, in which women are framed with consideration to a masculine viewer. Laura Mulvey (1999:835-836)

explains that the cinema, in particular, offers a number of ways in the which the pleasure of the male gaze may be experienced: Scopophilia, in which the mere act of looking is pleasurable in a voyeuristic sense, as well as a narcissistic identification with the human body depicted on screen. The male gaze is an 'active' one while the female has to passively receive the gaze. Mulvey (1999:838) states that traditionally, female characters in film are plot devices that serve as erotic objects for male characters, as well as for spectators in the cinema. In science fiction, the female is often associated with the (monstrous) alien other. The 1995 film, *Species* (Roger Donaldson), depicts an alien woman who seduces human men in order to mate. The classic science fiction film, *Alien* has a gun-toting heroine, yet, in a throwback to *Frankenstein*, one of the men dies in agony while giving birth to a creature.

Furthermore, negative and monstrous connotations of the feminine are not only shown overtly but through symbolic imagery such as womb-like objects, spaces and interiors. Barbara Creed (1990:136) names the "toothed vagina/womb of *Jaws*; and the fleshy, pulsating, womb of *The Thing* and the *Poltergeist*" as examples, stating that they recall the female genitalia and signify the latter as "a monstrous sign which threatens to give birth to equally horrific offspring". Both the image of woman as alien, as well as interiors that recall birth and the womb, are present in the film, *Under the Skin*, which is explored further in Chapter Six.

Finally, it is important to note the proposed solution (or at least one solution) to the gendered, misogynistic view of the sublime, is found in Donna Haraway's seminal *Cyborg Manifesto,* first published in 1983. Haraway (2000:292-293) states that "the cyborg is a creature in a post-gender world" in which "nature and culture are reworked; the one can no longer be the resource for appropriation or incorporation by the other". Women do not give birth to cyborgs, instead, they are an amalgamation or coupling of human and animal or human and machine. The cyborg, therefore, is a site of resistance.

Hence, as is argued over the past two chapters, the sublime re-emerges, in various forms, in times of crises in history, times of flux, change, and uncertainty. Since the 9/11 terror attacks, the face of global politics has shifted. The global financial crisis that started in 2008 reverberates still. The emergence of an extremist group like no other, the Islamic State, has launched unprecedented terror attacks on Western Europe, disrupting illusions of safety. White (2009:128) argues that it is "highly significant that the sublime itself, though of course an ancient concept, re-emerges as the object of a highly significant discourse at a moment of transformation and expansion in modern capitalism". White (2009:129) further states that the "capitalist sublime is an aesthetic at once of ecstatic awe, but also one of an uncanny terror

which underpins our lives". Cinema, as a medium of popular mass entertainment, is an expression of this capitalism.

CHAPTER FOUR: THE HISTORY OF SCIENCE FICTION IN LITERATURE AND FILM

An examination of the history of science fiction is relevant because it is through looking back that it is possible to identify certain visual tropes/icons and archetypal stories that give the genre its characteristics. The visual identifiers and typical storylines give expression to certain themes that are crucial in the representation of the sublime. These themes are discussed further in the next chapter under the science fiction sublime.

The historical overview of science fiction in this chapter is by no means exhaustive nor comprehensive as the scope of the study does not make space for this. This chapter seeks to provide a cursory synopsis of the origins of science fiction by highlighting some of the most important events and works that informed its development. The focus will be mostly on Western science fiction, that is Europe and North America. While television, particularly over the past few decades, has provided some supreme examples of science fiction, the scope of the study does not allow for an exploration of the medium and therefore, only brief mention is made of it. The aim of this chapter is in part, to show how science and fiction have played off one another.

4.1 Identifying science fiction: Archetypal stories and visual icons

David Seed (2011:ix) argues that it is "madness" to try and define science fiction because it is a contested subject matter with various authors and academics putting forth differing interpretations. Science fiction is often fused with other genres, like action, drama and horror, further muddying the waters. Hugh Gernsbeck, one of the fathers of science fiction (discussed later in this chapter), referred to SF as a combination of "romance, science and prophecy" while science fiction novelist and academic, Robert A Heinlein (1907-1988), preferred to call it "'realistic speculations about future events'" (Seed 2011:ix). Others, thinking of blockbuster science fiction films, for example, might define SF as stories about incredible journeys such as into space, fights with aliens or anything that foregrounds technology.

Furthermore, there are some who have tried to divide SF stories into two categories: 'Hard' science fiction and 'soft' science fiction. The former refers to so-called 'hard' sciences like physics, chemistry and engineering, while the latter concerns 'softer' sciences like sociology, anthropology and psychology. According to Katherine Cramer (2003:187), in hard SF "a relationship to and knowledge of science and technology is central to the work". Hard SF is often viewed as having a closer affinity to scientific fact than soft SF. This division is inherently

problematic, however, as some fans have been critical of soft SF while some literary critics have been dismissive of hard SF.

While it may not be possible to come up with one exhaustive, unambiguous or final definition, there are quintessential stories and visual icons that can be traced back to science fiction's roots nearly two thousand years ago. Farah Mendlesohn (2003:6) states that "[s]cience fiction has come to rely on the evolution of a vocabulary, of a structure and a set of shared ideas which are deeply embedded in the genre's psyche". This is illustrated in the brief historical account in the next section. Some of the archetypal stories include:

1. Space travel/fantastic travel/exploration

These stories can take place either in space or on an unseen part of Earth like beneath the ocean or beneath Earth's crust. Time travel narratives do not necessarily involve moving forwards or backwards in time but may involve alternate histories taking place in the present. Sean Redmond (2004:114) states that with the time travel narrative, events "either open in the altered past, the transformed present or the possible future".

2. The artificial or unnatural creation of 'life'

This includes man-made monsters or robots. The monster often serves as a warning not to tinker with God's creation. Robots, on the other hand, may be 'good' or 'evil'. Both such creations serve to ask questions about the purpose and future of humanity.

3. Mechanisation or the impact of future technologies

These stories are often about Virtual Reality and cyberspace and can overlap with the artificial creation of robots. These plots are either technophilic or technophobic, a theme that is explored in the next chapter.

4. The transformation of the human body

One example of this is through biotechnology, thereby creating cyborgs. The cyborg is a hybrid between human and machine and similarly to the artificial creation of life, it poses questions about what it means to be human. Another way in which the body might be changed is through disease or an infestation by something non-human.

5. Aliens

This could be an invasion of aliens or the discovery of aliens on a distant planet. Aliens too may be good or evil, saviour or savage. Some aliens try to help humans while others are merely intent on destruction.

6. Utopias and dystopias

These narratives concern mostly future societies (or, sometimes alternate histories). A utopia[26] is a kind of idealist society where among other things, everyone may be equal, there is no crime, rulers are benevolent, kind and not power-hungry and everyone has enough resources. In contemporary times, a utopian narrative often turns dystopian. Dystopias are places where there is little or no tolerance for difference, rulers are cruel and suppress dissent, there is no freedom of speech and thought, and resources are scarce.

7. Disasters and apocalypses

These two narratives are often linked in one film. Disaster films fall into a hybrid genre of science fiction and action/adventure. Natural disasters, like massive storms, a new ice age, floods that cause most of Earth to be covered in water, major droughts that turn the world into a desert – these events are most often caused by humankind's folly. An apocalypse is a society in which what mankind does in the present has disastrous consequences for the future.

These archetypal stories also contain some conventional or iconic visual tropes. Among the most characteristic and recognisable are the following:

1. The spaceship

The spaceship is usually a visual cue to the audience that the film is set in the future. The spaceship may be treated in a positive or negative light, or as matter-of-fact i.e. the spaceship is understated and minimised. In the *Star Wars* films*,* spaceships are both positive and negative: Han Solo's Falcon being the positive, heroic, 'friendly' spaceship and the Empire's Death Star being a cold, clinical place where evil things happen. In the *Star Trek* films, the USS Discovery is a positive space. In *2001: A Space Odyssey* and *Moon* (Duncan Jones 2009*)*, the spacecraft themselves become places of evil where the computer or artificial intelligence running the craft becomes deranged. Visually, such spaceships can be dark and menacing (for example, the oft-cited womb-like interior of the ship in *Alien*) or cold and clinical with lots of white and light like the first spaceship in the second part of *2001*.

2. The time travel device/machine

Time travel represents the disintegration of time through a paradox, for example, if someone goes back in time and kills their father that person would cease to exist in the present or future. This example, Penley (2004:133) argues, "shows that it is impossible to separate ourselves

[26] The etymology of the word "utopia" shows it is an amalgamation of two terms: "'eu-topia' (good place) … [and] 'out-topia' (no place)" (Seed 2011:69).

from time" and therefore this narrative explores humans' inextricable relationship with temporality. Visually, the time travel device varies greatly from film to film. In the adventure science-fiction film, *Back to the Future* (Robert Zemeckis 1985) the device is a modified car. In *The Terminator* (James Cameron 1984), the time machine looks like a kind of gyroscope. In the *Doctor Who* television series, the Tardis travel machine is an old-fashioned British police telephone box. In the mind-bending 2007 Spanish time-loop film, *Los Cronocrímenes* ("Time Crimes", Nacho Vigalondo 2007), the device is a kind of submersion tank.

3. Robots/androids and cyborgs

The robots[27] and androids in science fiction are often anthropomorphised with distinct personalities like Robby of *Forbidden Planet* (Fred M Wilcox 1956). They either conform to, but most often, challenge Isaac Asimov's laws of robotics (discussed under the history of science fiction). Many of these creations have a desire to be treated as equal to humans, for example in *Westworld*[28] (Michael Crichton 1973). Redmond (2004:156) distinguishes between the "humanist cyborg" and "pathological cyborg" – the first "is driven by the logic of machine aesthetic and longs for the human emotion and human attachment that will add existential meaning to its fragile outer shell", while the second "wants to melt away its human simulacra to symbolically rid the Earth (past, present and future) of what they rationalise to be their fleshy, useless skin material and the flabby emotions that are tied to it". Visually, robots often look like a version of the Tin Man in *Wizard of Oz* – made of metal, sometimes with shiny chrome-like limbs. The robot often has humanoid facial features like eyes and a mouth, for example, in *Metropolis.*

Cyborgs,[29] as mentioned earlier, combine some human or flesh parts with visible metal and machine components like the Terminator in the film of the same name. Haraway (2000:293-294) in *The Cyborg Manifesto*, sets out three ways in which the cyborg occurs: A merger of human and animal, a merger of human and machine, and the disintegration of physical and non-physical. An example of the merger of human and animal is seen in *The Fly* (David Cronenberg 1986); the merger between human and machine is seen in *The Terminator*, *A.I.* (Steven Spielberg 2001) and *Ex Machina* (Alex Garland 2014); and the disintegration of the physical is seen in representations of cyberspace, for example, in *The Matrix* (The Wachowskis 1999).

[27] Although the idea of the robot was conceived much earlier, the term itself was coined in 1920 in a play – *R.U.R. Rossum's Universal Robots* by Karel Capec. According to Seed (citing Isaac Asimov 2011:55) the word "carried suggestions of heavy labour, even of slavery" while in a contemporary setting the word means "a self-contained, maybe remote-controlled 'artificial device that mimics the actions, and possibly, the appearance of a human being'".
[28] *Westworld* is also a television series, which began airing in 2016.
[29] "Cyborg" is a term that originated in 1960 "in relation to survival in outer space…" (Seed 2011:57).

4. The computer

A computer is a tool or device that makes difficult calculations and which is meant to assist humans with complicated mathematical tasks. Computers, like robots, are often anthropomorphised by giving them distinct identities like humanoid voices or a sense of humour. However, computers, like those on spaceships, are disembodied. These devices often malfunction, making them 'evil', like the computer HAL in *2001*, which commits murder and the onboard computer in *Alien*, called "Mother". The computer is also often the conduit through which a character can plug into cyberspace or virtual reality. Computers are where Bukatman's (1993:9) "terminal identity"[30] occurs.

5. The alien

The alien is both a visual icon and a theme, the latter of which is discussed in the next chapter. As a visual icon, the alien often has a doubling motif, that is, the alien mimics the human and often wears a human skin. The representation of the android or cyborg is regularly treated in the same way. JP Telotte (2004:59) states that "the alien represents the displaced terror and the frightening aspect of that desire for knowledge which, also arising from within man, has begun to produce life-threatening doubles". Otherwise, aliens are frequently depicted with triangular-shaped heads, glassy black eyes with no pupils, grey skin and anything from two to four fingers like in *Independence Day* (Roland Emmerich 1996). Some of these aliens might have tentacles or teeth. Aliens can serve to evoke the terror necessary for the sublime while presenting this at a distance via the cinema screen.

However, there are also aliens that are benevolent, who may appear more humanoid and are therefore less alarming. Many of these are alien saviours or messiahs. According to Hugh Ruppersberg (1990:34) the alien messiah "is an expression of transcendence, from the first stage of vulnerability and closure to the second stage of transcendence and openness"; and furthermore, "the alien's messianic identity points directly to a fundamental assumption of these films: That alien visitors would not only be benign but benevolent, and sublimely so". The alien messiahs' advanced technology exalts them and makes them holy. For example, in the 2016 film *Arrival* (Denis Villeneuve), alien visitors warn humanity that they must work together in order to save themselves from extinction. These almost biblical aliens can see the future and want to save humanity. Older films like *Close Encounters of the Third Kind* (Steven Spielberg 1977) and *E.T. the Extra-Terrestrial* (Steven Spielberg 1982) are similar in

[30] Terminal identity is discussed further in the next chapter.

depictions of benevolent or messianic aliens. There can even be a negative or inverted messiah such as in *The Terminator*.

6. The landscape: The apocalypse and the city

The landscape of science fiction films is often as recognisable as other visual icons. For example, the dystopian landscape, whether in a city or in the countryside, is characterised by images of dirt, of dilapidated and abandoned buildings, disintegrating machines like cars or implements that no longer work, a return to older analogue technologies like walkie-talkies, as well as plants and animals that are taking over civilisation. There is almost always a lack of resources, whether water, food, fuel or shelter. The dystopian landscape can be a desert like in the *Mad Max* films, *Dune* (David Lynch 1984) and *Stargate (*Roland Emmerich 1994), a city like in *Blade Runner*, a large body of water such as in *Waterworld* (Kevin Reynolds 1995), or even the planetary bodies of space itself (both Mars and the moon are desert-like) like in *Moon*.

The city itself has become an iconic visual signifier in certain sub-genres like cyberpunk. Seed (2011:48) describes the city in science fiction as “the supreme embodiment of technological construction”. The city in *Metropolis* is a modernist example of ‘progress’ (Figure 2) while the city in the cyberpunk film *Blade Runner* is a mixture of gritty, dark decay and the looming, towering office of the reigning Tyrell corporation.

Figure 2: The iconic “Tower of Babel” looms, *Metropolis*. 1927.
Screen shot by author.

7. Disaster icons

Natural disasters like floods, tsunamis, crippling droughts that turn the world into deserts, and asteroids hitting the earth are well-known visual icons and form part of the setting of science fiction film. Susan Sontag (1965:42) explores how the disaster film relates to terror, which of course, is imperative to the sublime:

> For we live under continual threat of two equally fearful, but seemingly opposed, destinies: unremitting banality and inconceivable terror. It is fantasy, served out in large rations by the popular arts, which allows most people to cope with these twin spectres. For one job that fantasy[31] can do is to lift us out of the unbearably humdrum and to distract us from terrors, real or anticipated by an escape into exotic dangerous situations which have last-minute happy endings. But another one of the things that fantasy can do is to normalize what is psychologically unbearable, thereby inuring us to it. In the one case, fantasy beautifies the world. In the other, it neutralizes it.

So-called 'escapist' science fiction film, that is, SF films like disaster films, partly negates, nullifies and overcomes the "psychologically unbearable", like the effects of climate change or mutated viruses. Examples of such films include *The Day After Tomorrow* (Roland Emmerich 2004), *28 Days Later* (Danny Boyle 2002), *Deep Impact* (Mimi Leder 1998) and *Geostorm* (Dean Devlin 2017).

According to Sontag, however, SF films, only partially normalise the unbearable. As Sontag (1965:42) argues, "collective nightmares cannot be banished by demonstrating that they are, intellectually and morally, fallacious". This seems to indicate that the sublime in science fiction film remains attainable, or at least partially so because even though the story is fallacious, it is not possible to completely banish or mitigate the terror of disaster, or the alien, or technology. Science fiction film provides the distance from the fear-inducing object or event necessary for the experience of the sublime but is close enough for the fear not to be completely ameliorated. Blockbuster-type disaster films may be viewed as a commodified version of representing the sublime, focusing on spectacular effects and action rather than a philosophical plot.

SF novelist and critic, JG Ballard (1930-2009), has a completely different view, however, arguing that disaster images *are* capable of representing doubts and concerns about the future. Ballard (in Seed 2011:109) states that catastrophes represent "'a constructive and positive act by the imagination, […] an attempt to confront the terrifying void of a patently meaningless universe by challenging it at its own game'". Films that focus on character or

[31] It is important to note that when Sontag talks about fantasy she is referring to the imagination rather than the genre of fantasy.

theme, along with effects challenge Sontag's view. Many of these films focus on the impact of disaster rather than the disaster itself. The film *Interstellar* is such an example, set after a blight has destroyed most crops, resulting in impending starvation (the film is discussed further in Chapter Six). Ballard's use of the term "terrifying void" is useful as it echoes the "nothingness" of Newman's work, and therefore may be seen as a link to the sublime.

4.2 The origins of science fiction in literature: The fantastical and outer worldly

4.2.1 Proto-SF: From the ancient to the nineteenth century

While the term "science fiction" was only coined in the twentieth century, literature containing the themes, plots and iconography associated with the genre can be traced back nearly two millennia. Stories about travel into space, below the depths of the ocean, to other worlds, or the encountering of other races can be found from as early as the second century. Going back even earlier, the myths of ancient Romans and Greeks are fantastical, with beings like gods and beasts.

The Syrian writer known as Lucian Samosata (AD 120-90) is considered by some to be a father of classical or proto-science fiction, with his descriptions of travel to outer space. One of the most important of these is *True History* (AD 160-80) about a ship that is taken to the moon after being picked up by a storm. Lucian also wrote a text called *Icaromenippus* (AD160-80) which tells the story of a time traveller visiting the moon.

Aside from other isolated texts that reference space travel, there was a kind of hiatus in science fiction tales between AD 400-1400. The re-emergence of the genre, or at least, its themes, reflects the scientific discoveries of the time just as the technological sublime does. Therefore, science fiction must be understood as being part of history, as a reflection of historical events themselves.

The fifteenth and sixteenth centuries saw a return of science fiction. The astronomer Nicolaus Copernicus (1473-1543) made the controversial finding that the Earth and other planets revolve around the sun and not the other way around. Both Copernicus and the Italian astronomer Galileo Galilei (1564-1642) – who championed Copernicus' heliocentrism – ran into trouble with the Catholic Church, which insisted that Earth and therefore, humans, are at the centre of God's creation. But as much as the Church tried to oppose these facts, the Copernican revolution revealed a sense of wonder at creation, at what was beyond the confines of Earth. Adam Roberts (2005:40) states that astronomy "created an imaginative

space in which humanity might encounter radically different beings – aliens, the Other[32], the material embodiments of the alterity that drives the mode".

Furthermore, what the new astronomical facts revealed was how much bigger the universe was than previously thought. The wondrous discoveries of this time recall the sublime: The expanse, the largeness, the evocation of infinity and the characteristic "sense of wonder". The invention of the telescope by German-Dutch lens maker, Hans Lippershey, in 1608 allowed people to see into the cosmos. This new perspective resulted in an opening up of the mind. This reflects Kant's sublime, which takes place in the mind through Reason. Cornel Robu (1988:23) states that when one is overwhelmed by "the immensity of the physical universe", like the infinite cosmos, one "is compelled to resort to a non-physical reaction, to the idea of… [one's] free mind…".

Astronomers could begin to imagine a plurality of worlds after observing the planets while writers could describe voyages to other worlds, with at least some parts of their stories being based on science. The German astronomer, Johannes Kepler (1571-1630), who articulated the laws governing the motion of the planets, penned the story *Somnium* (published posthumously in 1634) in which demons transport a man to the moon while he is dreaming. Other similar texts emerged, like the story by English historian, Bishop Francis Godwin (1562–1633), *The Man in the Moone* (1638) and the novel by French writer, Cyrano de Bergerac (1619-1655), *Voyages to the Moon and Sun* (1656). These examples illustrate how space travel has been an archetypal storyline in science fiction for hundreds of years, along with the theme of discovery.

Another typical storyline that is still present in contemporary science fiction, is that of utopian societies. The most well-known of these is Thomas More's novel, *Utopia* (1516). More (1478-1535), who was an English philosopher, describes the fictional country, Utopia, where society is based upon rational thought, there is communal property, no crime, no poverty, tolerance and almost no distinction between classes. Another utopian story came from the English philosopher and the so-called father of modern science, Francis Bacon (1561-1626), with a work called *New Atlantis,*[33] an incomplete version of which was published posthumously in 1627. However, one of the most important contributions Bacon made to SF was not his fiction,

[32] The alien other is one of the key themes and visual tropes in science fiction and is discussed later in this chapter.
[33] *New Atlantis* is about a utopian society based on science with futuristic inventions like telephones, microscopes and genetic manipulation.

but his scientific work, notably the development of the "Baconian method".[34] Bacon emphasised empiricism in science, that is, deductive reasoning based on careful observation of occurrences in nature through the senses. Similarly, Burke's version of the sublime focuses on the senses, like sight and hearing.

During the seventeenth and eighteenth centuries, there was rapid technological and scientific development, resulting in a fascination with and a glorification of science. Literature and science became inextricably interlinked. The physicist, Isaac Newton (1642-1726), for example, who discovered the laws of motion and gravity, was known for writing "science-poetry". This exponential development of science and technology was a precursor to the technological sublime of the nineteenth century. What is important about Newton to the history of science fiction is his combination of literature or poetry, and science.

One of the writers who was most influential in the development of science fiction as a literary genre was the English author, Jonathan Swift (1667-1774), with his novel, *Gulliver's Travels* (1726).[35] While the book may not necessarily be considered science fiction proper as it is understood in contemporary times, its description of other worlds is related to a sub-genre of science fiction, called speculative fiction. Heinlein (1991:9) coined the term "speculative fiction", defining it as a story in which "accepted science and established fiefs are extrapolated to produce a new situation, a new framework for human action. As a result of this new situation, new human problems are created – and our story is about how human beings cope with those new problems". In other words, the story is focused on the characters and the human problems they experience, rather than on the science itself. The science fiction part of the story, such as technology and space travel, form the setting and not the plot. *Gulliver's Travels* was published during the same period as a story by French philosopher and Enlightenment writer, Voltaire (the pseudonym of François-Marie Arouet, 1694-1778), called *Micromégas* ("Littlebig", written in 1730 and published between 1750 and 1752) in which the protagonist is an alien who is 120,000 feet (five kilometres) tall and who uses his superior scientific knowledge to journey through the solar system.

[34] The Baconian method is the name given to Francis Bacon's postulation on how to study natural phenomena. Firstly, the facts (as observed by the senses) are described; secondly, the facts are classified into categories; and thirdly, whatever facts are unrelated to the phenomenon being studied are rejected (Baconian method 2018).

[35] *Gulliver's Travels* is a political satire which sees the protagonist, Lemuel Gulliver, leaving England for a voyage and then being shipwrecked on Lilliput, an island of tiny people. After being imprisoned and then escaping from the island, Gulliver journeys to the land of the Brobdingnags where, conversely, everything is gigantic. Gulliver's third journey sees him discovering a group of new islands over which hangs a flying island called Balibali. Finally, he finds a utopian race of sapient horses. At first glance, there might be no science or technology described in the novel which would classify it as science fiction, but Roberts (2005:70) argues that the story embodies mathematics because of the calculations involved in first two volumes/journeys. The focus is on how the settings impact Gulliver as a character and what they represent, rather than on the fantastical settings themselves.

Both Swift and Voltaire's novels are examples of so-called *voyages extraordinaires*, which are about travel to wonderful places or about wondrous beings coming to visit Earth. These are also the kind of stories later popularised by Jules Verne and HG Wells. Mostly, the tales concerned journeys away from Earth or journeys to the underground/unseen worlds below the surface of the Earth. Such stories gained popularity in the eighteenth century. An example of this is *Journey of Niels Klim to the World Underground* (1741)[36] by Norwegian writer, Baron Ludvig Holberg (1684-1754), a popular work that was translated into many European languages. The extraordinary voyages were a forerunner of the archetypal space and time travel stories.

It is interesting to note that the glorification of science referred to earlier, such as through the discovery of Newtonian physics comes just ahead of Burke's treatise of the sublime in 1757 and Kant's first treatise in 1764. While Burke sought to find the sublime in objects of nature, he makes reference to how infinity may evoke the sublime. Kant, on the other hand, refers specifically to astronomy i.e. the starry skies as an evocation of the mathematical sublime, of that which is too great to comprehend.

4.2.2 The nineteenth century: Gothic meets science fiction

The nineteenth century saw science fiction literature develop a close relationship with Gothic fiction, from which sprang another genre: Horror. Fred Botting (2005:111) defines Gothic fiction as concerning "supernatural occurrences and figures… [containing] wanderings in desolate landscapes and invocations of diabolical forces". Gothic influences can also be seen in literature such as Emily Bronte's (1818-1848) *Wuthering Heights* (1847), Bam Stoker's (1847-1912) vampire horror *Dracula* (1897) and the poetry of Samuel Taylor Coleridge.

The early nineteenth century, however, was dominated by two writers: English author Mary Wollstonecraft Shelley (1797-1851) and American author and poet Edgar Allan Poe (1809-1849). These two writers articulated the development of new themes and ideas, related to the Industrial Revolution, as explained in the previous chapter under the discussion of the American technological sublime. Many critics locate the 'true' beginning of science fiction with these two writers, in terms of what contemporary science fiction is understood to mean. These authors ask questions like: "What have we as humans done? What is humanity capable of?"

[36] The protagonist, Niels Klim falls into a crack in the ground and into another world inside the Earth.

While Shelley's *Frankenstein: or, The Modern Prometheus* (1818)[37] could be viewed as *the* seminal work of science fiction, it also straddles the genre of horror.[38] The novel sees the creation of what Roberts (2005:94) calls a new archetypal figure: The monster. What makes the novel a hybrid of Gothic and science fiction is contained in a note in later editions, which specifically mentions electricity, as well as the monster's design by a scientist in a laboratory (Botting 2005:113).

[37] The protagonist, Dr Victor Frankenstein, is a scientist who creates a monstrous yet humanoid, sentient creature by imparting life to non-living matter. Many film versions show Frankenstein using electricity (the frightening new law of nature discovered by Benjamin Franklin circa 1752 and turned into a technology during the 1800s) to give life to his creature, although this is never described in the book itself.

[38] Science fiction and horror are genres that overlap in their plots and iconography. Yet, there are many who attempt to distinguish between the two. JoAnn Palmeri (2006:314) refers to Kim G Kofmel in suggesting that "the primary response evoked in reading these genres can be used to distinguish them: Horror evokes a visceral response, science fiction an intellectual response, and fantasy an emotional response". However, as is derived from the discussion of the SF sublime in Chapter Five, science fiction too may evoke a visceral response.

Sobchack (1987:29-30) states that one of the key distinctions between science fiction and horror is their focus:

> The horror film is primarily concerned with the individual in conflict with society or with some extension of himself, the SF film with society and its institutions in conflict with each other or with some alien other… Both genres deal with chaos, the disruption of order, but the horror film deals with moral chaos, the disruption of natural order (assumed to be God's order), and the threat to the harmony of hearth and home; the SF film on the other hand, is concerned with social chaos, the disruption of social order (man-made), and the threat to the harmony of civilized society going about its business.

Therefore, the intent of the film may be one way in which to distinguish between the genres. According to Joyce G Saricks (2001:107), the horror film frequently contains monsters, often supernatural, while there are "[u]nexpected incidents, designed to jolt the reader, accelerate the pacing and keep the story moving quickly". Protagonists are "often haunted, shattered individuals. Antagonists are always sinister, monsters in some form, whether real or imaginary" (Saricks 2001:107). Yet it doesn't mean that inhuman creatures do not occur in science fiction. Saricks (2001:263) states that in science fiction, "[c]haracters are generally secondary to issues and atmosphere. However, authors do use aliens and otherworldly creatures to emphasize the otherness of their stories".

Sobchack (1987:30-32) spends much time distinguishing between the "Monster" of horror films and the "Creature" of science fiction: the monster is personalised and both the humans and monsters should "be given equal weight and time" in the film; while in science fiction the creature is "less personalised" and "lacks a psyche". For example, in the film *Under the Skin*, the alien lacks empathy, making it a Creature rather than a Monster. At the same time, the focus is mostly on the alien rather than on her human victims.

A number of films that concern aliens straddle horror and science fiction, including the *Alien* franchise and *Under the Skin*, which is discussed in more detail later in the study. Both may fall under a sub-genre of horror, namely body horror, which results in "the destruction of the body, a destruction that is shown explicitly on screen" (Cook & Bernink 1999:201). Body horror is also known as biological horror; it is about guts, gore, blood, flesh, brains and bone. It is about a monster obliterating and eviscerating the body in a graphically violent way, often for shock value. According to Ronald Allan Lopez Cruz (2012:161) body horror "is characterized by the manipulation and warping of the normal state of bodily form and function".

SF and horror may be described as two sides of the same coin or as existing along the same spectrum. As Sobchack (1987:58) states: "What is important to recognize is that both genres involve *interaction* between magic, science and religions – and the only thing which really separates the genres is the dominant emphasis given to either the sacred or the profane". In the film *Alien*, for example, the alien is both a Monster and Creature. The magical and religious motifs come from the desecration of the human body (which, according to the Bible, is seen as a temple) by a Monster. The science or profane motif is most obviously seen in the space travel that happens in the film, as well as the examination of the alien Creature in a laboratory.

Poe, on the other hand, is mostly known for his strange Gothic murder mysteries though he also wrote some seminal science fiction short stories. Among these are “The Conversation of Eiros and Charmion” (1839) in which a comet destroys the world and “The Facts in the Case of M Valdemar” (1845) in which a man is hypnotised just as he is about to die and is then revived seven months later. As soon as that happens though, he disintegrates. This story is an early precursor of the zombie narrative.[39] “The Unparalleled Adventures of One Hans Pfaall” (1835) tells of a man who uses a special kind of balloon to travel to the moon where he finds it is already inhabited. In 1849’s “Von Kempelen and His Discovery” a chemist transforms lead into gold in a laboratory.

The Gothic impact on science fiction is most clearly seen in the monster narrative, such as in the *Alien* film series, the various *Godzilla* films and *Pacific Rim* (Guillermo del Toro 2013). The Gothic monster also sees changes in the way in which the sublime may be present in science fiction, through the uncanny. American artist Mike Kelley (quoted in Morley 2010a:[sp]) conflates the sublime and the uncanny, arguing that the sublime derives from “the natural limitations of our knowledge: When we are confronted with something that’s beyond our limits of acceptability, or that threatens to expose some repressed thing, then we have this feeling of the uncanny”. The monster stretches the imagination to its limits. It is something unacceptable as it does not exist, yet it ‘appeals’ to something inside the reader/audience, something repressed. Zylinska (2001a:162) cites Wendy Wheeler’s argument that the uncanny and the sublime are “‘represented during the Enlightenment as ways of formulating what has become formless (*das Unform* – the monstrous) or difficult to regulate…’”.

Even as the Gothic became a characteristic in science fiction, advances in science continued to have an impact on literature. New challenges were launched against religious claims that Earth is only 6,000 years old and that God created all animals and humans fully formed. This was, arguably most famously, challenged by the British biologist and naturalist, Charles Darwin (1809-1849), in the seminal *On the Origin of Species by means of Natural Selection* (1859). In this work, Darwin sets out the principles of natural selection and biological evolution which prove the Earth is hundreds of millions of years old. The evolution story is often reflected in science fiction stories like the prequels to the *Alien* series.[40]

[39] The zombie narrative in fiction originates in older African (and subsequently, Haitian) cultures and focuses mostly of the reanimation of corpses that are unthinking. According to Kevin Boon (2011:7), zombies lack a “metaphysical quality of their essential selves”. In other words, they are without a soul or personality and their actions are often ‘mindless’.

[40] In the films *Prometheus* (Scott 2011) and *Alien: Covenant* (Scott 2017) the origins of the aliens are explored. Set in the future, the crews of the spaceships in the stories discover the origins of mankind, as well as the evolutionary development of the creatures and of other sentient beings.

There are even more examples of how science itself directly impacted literature. The scientific term coined by the German scientist, Rudolph Clausius (1822-88), *entropie* or entropy,[41] became a popular theme and plot device in science fiction, still used in contemporary SF. This principle was adapted and changed in science fiction to a popularised "notion that everything in the universe is caught up in an eternal and irresistible process of decay, against which background all constructive endeavour must ultimately prove futile…" (Brian M Stableford 2006:160). This is something that is present in disaster narratives in which the Earth inevitably hurtles towards extinction. The film *Interstellar*, discussed in Chapter Six, draws from the theme of entropy. The idea that Earth is tearing headlong towards imminent destruction is one that may cause anxiety and fear. The end result of entropy is total annihilation, a negation of the physical world that ends in the void, akin to the emptiness that lies beyond the zip of Newman's paintings (and something that may evoke the sublime).

At the same time as the Gothic/horror/science fiction narrative was taking hold, stories of inventions, which valorised scientists, became popular. One of the first was the 1868 dime novel[42] *The Steam Man of the Prairies* by American Edward Ellis (1840-1916).[43] Dime novels are important because they widely disseminated and familiarised science fiction narratives. Despite often conflating other genres like the Western and its masculine gunslinger heroes with science fiction, dime novels introduced a recognisable iconography and archetypal stories to SF. These icons, still found in contemporary science fiction, include the typical scientific inventor, submarines, rockets and journeys to the moon.

One of the most well-known figures in the tradition of writing about travel and scientific exploration is Verne (1828-1905), introduced earlier. The story of the adventurous journey itself is the core appeal of Verne's works.[44] By this time, the so-called great age of exploration, from Columbus to the height of colonisation, was coming to an end. Yet the desire to discover new worlds remained. Arthur B Evans (1988:15) states that Verne portrayed the modern man as "conquering the elements with his technological devices, piercing the mysteries of Nature

[41] Entropy is a term in thermodynamic law: "[W]henever there is a flow of energy, some is always lost as low-level heat… entropy is a measure of this loss. In a broader sense we can refer to entropy as a measure of the order of a system" (Nicholls & Langford 2017). In science fiction, entropy refers to a decline of order.
[42] Cheap, paper-bound novels of popular fiction or weekly story papers. "Dime novel" became a catchall term for these.
[43] Set before the term "robot" was conceived, the book tells the story of a teenage boy who invents a massive steam-man who carries him in a carriage on various adventures across the American prairies.
[44] Among Verne's most celebrated stories is 1862's *Cinq semaines en ballon* ("Five Weeks in a Balloon") about a hot-air balloon trip across Africa. This story resulted in Verne receiving a publishing contract to produce a series of *voyage extraordinaires* books. *Journey to the centre of the Earth* (1864) is a work filled with scientific and technological details. In the story, a German professor and his two companions descend through a volcano to the centre of the earth where they discover a subterranean world filled with pre-historic animals and strange phenomena. Conversely, 1865's *De la terre á la lune* ("From the Earth to the moon") describes how a group of Americans attempt to build a cannon that will allow people to be shot to the moon.

with his science".[45] The drive to explore and conquer the unknown brought people before natural marvels that appeared sometimes alien and mesmerising, and sometimes menacing. Verne's stories occur around the same time as the development of the American technological sublime, and the kind of restlessness that prompted explorers to journey to distant lands underlies many works of science fiction of the time. More recently in literature and science fiction films, there has been a focus on the human occupation of Mars, yet another reflection of scientific exploration being mirrored in the arts. The journey in contemporary science fiction is often present in time travel and space travel narratives, like in *Interstellar*, or even in some cyberspace stories like *Tron*, something that is explored later in this study.

The other author that was seminal in developing science fiction in the late nineteenth and early twentieth centuries was HG Wells (1866-1946). This English writer's stories reflected the profound changes that were happening in science. The 1895 novel *The Time Machine* (adapted into feature films in 1960, 1978 and 2002) is about a man who travels to the year 802,701. In the book, Wells attempts an explanation of space-time, a precursor to Albert Einstein's Theory of Relativity, published in 1905. Other notable stories by Wells include 1896's *The Island of Doctor Moreau*[46] (adapted into feature films in 1977, 1996 and 2005) and 1898's *The War of the Worlds*[47] (adapted into films in 1953, 1981, 2005, and 2012).

4.2.3 The early twentieth century: Dystopias and the magazine era

Verne and Wells ensured a boom in the popularity of science fiction in the 1890s leading into the early twentieth century. Two identifiable underlying attitudes towards science and technology emerged in science fiction, also reflected in the American technological sublime: One positive and the other negative. If the sublime as a concept or feeling resists representation, as discussed in the previous chapter, science fiction could be a way in which to attempt representation, as well as being a way in which to evoke the sublime. The sublime could serve as a way to derive meaning from science and technology, through science fiction texts, particularly as the twentieth century got underway. Roberts (2005:158) refers to a "mythic-transcendent consciousness" that began to permeate some science fiction during this

[45] In 1869-70, Verne wrote one of his most famous works, one which has been adapted to film multiple times, *Vingt mille lieues sous les mers* ("Twenty thousand leagues under the seas"). In this story, an American government team goes underwater where it expects to find a mysterious monster. The monster, however, turns out to be a futuristic submarine.
[46] This story features a monster trope similar to the one in *Frankenstein*. Doctor Moreau is a scientist who splices animals to make them look more human and to increase their brain power.
[47] This story, about a future alien (Martian) invasion of Britain, sparked a famous panic when it was broadcast on BBC radio, with many mistakenly believing it to be a real news broadcast. This story captures what Roberts (2005:148) calls "a fundamentally xenophobic fear of foreignness". In other words, the alien Other becomes a big theme in science fiction, an "us versus them" attitude.

time. This mythic-transcendence is present in the early part of the 1900s in science fiction with mystical and religious themes, as well as texts that question what it means to be human. The philosophical writer Franz Kafka (1883-1924) wrote *Die Verwandlung* ("The Metamorphosis", 1915) in which a protagonist wakes up as a giant insect-like being, while Kafka's 1925 novel, *Der Prozeß* ("The Trial")[48] poses absurdist questions in a dystopian setting in telling the story of Joseph K, who is arrested and put on trial but never told on what charges. Another example is the author CS Lewis (1898-1963) who wrote very religious science fiction, such as his *Ransom* trilogy (1938-1945).[49] These books posit a series of "what if" questions in a religious setting.

On the back of Kafka's *The Trial,* the dystopian setting begins to seep into science fiction writing. The kind of fascism reflected in *The Trial* emerges again in Katherine Burdekin's (1896-1963) *Swastika Night* (1937), an eerily predictive alternate history set seven centuries after Hitler when the Nazis have created an empire over Europe and Africa. Other examples of the rise of the dystopian setting is seen in Aldous Huxley's (1894-1963) seminal *Brave New World* (1932)[50] and George Orwell's (1903-1950) *Nineteen Eighty-Four* (written in 1949).[51]

However, it was not the more so-called 'high-brow' literature that ensured the proliferation of science fiction as much as the oft-derided pulp science fiction, in the form of dime novels or Penny Dreadfuls at end of the nineteenth century. Magazines like the American pulp publication *The Argosy* (1886) and Britain's *The Strand Magazine* (1891-1950) began carrying serialised science fiction stories. What is notable about this is that the stories were illustrated, the first indication that science fiction lends itself to visual representation. But while the pulps may have popularised science fiction among the masses, it resulted in ridicule with Roberts (2005:175) describing these texts as being "by and large, a puerile and aesthetically limited

[48] "The Trial" could also be seen as existential horror. Existential horror may be defined as "the dread and terror experienced by the individual upon realising the circumstances of their existence. In horror movies this translates to fear of isolation, uncertainty, meaninglessness, insignificance, oblivion, responsibility and inevitability" (Kyle McDonnell 2015:[sp]).

[49] Elwin Ransom is kidnapped by an evil scientist and taken to Mars. That planet contains an alien civilisation that did not experience the Fall of Man and so never needed to be saved by Christ. Ransom also journeys to the planet Venus where Adam and Eve are tempted by a Satan, in the form of another man. The story ends with Ransom encountering a Satanic research group that is trying to bring the Arthurian magician Merlin back to life.

[50] The story is set in AF 637 (637 years after Henry Ford built the Model T which revolutionised transport) and features a society based on "principles of specialist engineering, uniformity and a Taylorised communal ideology" (Roberts 2005:159). People are 'hatched' rather than born, conditioned into castes and drugged. Religion and art have disappeared. This story becomes an archetype that influenced contemporary science fiction films like *Gattaca* (Andrew Niccol 1997), *Equilibrium* (Kurt Wimmer 2002) and *Equals* (Drake Doremus 2015).

[51] The book is set in a world that has been divided into three superstates: Oceania, Eurasia and Eastasia. The three are constantly at war with one another and repeatedly switch sides against each other. Oceania, where the main story takes place, is ruled by the tyrannical "Party", headed by the nameless and unseen "Big Brother" who is all-seeing and all-knowing. All thoughts, words and facial expressions are monitored to make sure no one even thinks of rebelling. Children gleefully report their parents to the Party for thought crime punishment. Propaganda is the only kind of information disseminated and sex is for procreation only.

literature, aimed at the lowest denominator, often ideologically reactionary, rarely more than a literature to pass the time, a literature of distraction". However, while these kinds of stories might have been mindless entertainment, they ensured the spread of science fiction and Roberts' description may be described as an elitist one that ignores the significance of the contribution that pulp SF has made.

One of the most important figures in the development of science fiction literature was Hugo Gernsback (1884-1967) with some opting to name him the father of science fiction rather than Shelley or Poe, even though Gernsback was a magazine publisher and editor not a writer. Gernsback created the first magazine dedicated solely to the science fiction genre in 1926: *Amazing Stories: The Magazine of Scientifiction*. More importantly, it was Gernsback who invented or coined the term "science fiction", a contraction of "scientific fiction". Gernsback (in Landon 2002:52) firmly believed in the importance of science fiction as genre, stating that "it is to be an important factor in making the world a better place to live in through educating the public to the possibilities of science and the influence of science on life which, even today, are not appreciated by the man on the street…". Therefore, Gernsback could see the importance of science fiction and the contribution it could make not only to literature but the genre's importance in informing ordinary people about scientific developments and possibilities. As Brian Attebery (2003:33) states, "[m]any stories in the pulp magazines revolved around solving a problem through scientific means: Scientific information was doled out throughout the tale, usually by characters explaining to one another". Therefore, SF was seen as a way of educating the masses about science and technology.

As noted previously, science fiction started becoming a visual medium in the pulp era, with striking black-and-white or colour illustrations in magazines and dime novels. This trend also influenced the emergences of science fiction comic strips like 1929's *Buck Rogers*, 1934's *Flash Gordon* and the creation of DC Comics in 1938, when the first *Superman* comics were published. These protagonists were heroes with superpowers.

4.3 The emergence of science fiction film and the 'Golden Age' of SF

The very first science fiction films were often not taken seriously. Mark Bould (2003:79) calls these first forays "one-reel trick movies which exploited the basic special effects". Indeed, these films were mostly experimental, happening as the exploration with the medium itself was taking place. Interestingly, many of these filmic and cinematic experiments involved science fiction or at least elements thereof. For example, one of the first and most famous experiments in film happened in 1902 when French pioneer filmmaker, Georges Méliès (1861-

1938), produced and directed the short, *Le voyage dans la lune*. This silent black-and-white film of just over 12 minutes was inspired by Verne and Wells and sees a bunch of explorers take a cannon-fired rocket to travel to the moon, which has a human face (Figure 3).[52] Many of the visuals may appear ludicrous to the contemporary viewer, but one of its most powerful and iconic scenes is the landing on the cratered face of the moon. The film even contains some special effects, for example, the travellers are holding telescopes one moment and the next moment these objects turn into chairs. There are also crossfades and clever editing.[53]

Figure 3: The face of the moon, *Le voyage dans la lune*. 1902.
Screen shot by author.

Some of Méliès' earlier films also show scientific experiments, recalling Mary Shelley. In the film, *The Magician* (1897), the titular character is seen conjuring a table and a box out of thin air and then disappearing inside. The box opens and a harlequin climbs out while food magically appears on the table. Another film from 1897 by Méliès, *Chirurgien Americain,* shows a surgeon experimenting on a homeless man, replacing his legs and body.

Many early science fiction films were based on classic literature from the previous century. For example, there were multiple film versions of Robert Stevenson's (1850-1894) novel

[52] On the surface of the moon, the men find a group of 'aliens'. The men fight the aliens using their umbrellas as weapons to reduce them to dust. The aliens overpower the men and take them to the alien 'leader.' But, the men manage to escape and make it back to earth where they are celebrated.
[53] The short film has had an enduring impact on popular culture. Decades later, the film inspired the band Queen's 1995 music video "Heaven for Everyone" which features clips from Méliès' film, as well as the music video for "Tonight, Tonight" by the band, The Smashing Pumpkins.

Strange Case of Dr Jekyll and Mr Hyde (1886): in 1908, two in 1910, one in 1912, three in 1913 and four in 1920 (as well as numerous others in decades to follow). One of the first versions of *Frankenstein* was also made in 1910.

At the same time, many scientists were depicted as evil, often as megalomaniacs who want to control technology for insidious purposes. *The Elixir of Life* (1911) by Arthur Ransome is about a liquid substance that causes immortality, the result of which is over-population. A film version of *The Island of Dr Moreau* in 1913 and of Poe's *The Murders in the Rue Morgue* (1914), both portray the scientists as mad. Furthermore, it was not just the scientists themselves that were portrayed negatively. Their inventions, too, were depicted with terror. Johnston (2011:59) explains that there was a scepticism about machinery, with worries that robots would become self-aware while remaining soulless and without morals. This links to the technological sublime which, as argued in the previous chapter, may be viewed with either pessimism or optimism, and which also links to the theme of technophilia/technophobia, discussed in the next chapter.

A ground-breaking film in 1927 set the tone for many stories about robots and artificial intelligence to come. Lang's *Metropolis* is set in the year 2000 in a futuristic city divided between the working and ruling class, with a Marxist influence clearly visible. Workers go underground daily to work with large machines in a type of sub-city while the rich live above ground.[54] The iconic images of a dystopian cityscape (see Figure 2), the large machines and the android Maria inspired numerous science fiction films to come. Johnston (2011: 60) states one of the most important things brought about by this film was the idea of robots being built for pleasure, a theme further explored in films decades later, like *Blade Runner*. This idea has a strong correlation to the feminine sublime in the relation between the subject, like a man, and an othered object, the female robot. In both films, the android is a tool to be used and exploited. Maria is made to look like a human woman but has no agency while the replicants (cyborgs) in *Blade Runner* have distinct personalities, including the ability to 'feel' fear, but have been built only to serve humans.

[54] Freder, the son of the capitalist master who oversees all production, falls in love with a woman called Maria, a socialist who is loved by the workers and who foretells of a mediator who will help bridge the gap between the workers and capitalists. Freder's father, Joh, is furious when he finds out about Maria and his son's love for her. He orders an inventor to create a robotic duplicate of Maria to sow discord among the workers and to destroy the real Maria's relationship with his son. The 'evil' robot Maria is compared to the 'whore of Babylon' described in the Book of Revelations in the Bible. She embarks on mass seduction of men and incites riots during which workers start destroying the machines. The destruction results in the workers' homes being destroyed in the process. When this happens, the crowds search for Maria, calling her a witch to be burned at the stake. The real Maria is the heroine, however, and manages to save the workers' children. Luckily, the evil Maria rather than the real one is burned at the stake and Joh realises belatedly he has put his son in danger as well. In the end, Freder becomes the mediator and helps bring understanding between his father and the workers.

The end of the 1920s saw the addition of sound to cinema, something that had a profound effect on science fiction film. The first significant SF film with sound was *Just Imagine* (David Butler 1930), a musical comedy set in 1980s New York, which also involves a trip to Mars. At the same time came a new wave of adaptations of classic science fiction books: *Frankenstein* (James Whale 1931), *The Island of Lost Souls* (Elre C Kenton 1932) based on *The Island of Dr Moreau*, *Dr Jekyll and Mr Hyde* (Rouben Mamoulian 1932), and *The Invisible Man* (James Whale 1933) based on Wells' novel.

However, Roberts (2005:190) argues that the most notable SF film to come out of this decade was based on an original screenplay: 1933's *King Kong* (Merian C Cooper & Ernest B Schoedsack). The film tells the story of a giant ape that falls in love with a beautiful woman and kidnaps her.[55] One interpretation of *King Kong* is that it is a kind of warning about what happens when humans interfere in nature, as well as a depiction of the monstrous Other. What is notable in monster films like *King Kong* is the dialectical tension between what fascinates the viewer and what repulses them. Rosi Braidotti (1996:136) explores the Greek etymology of the term "monster", or "*teras/teratos* which refers to both a prodigy and to a demon. It is something which evokes both horror and fascination, aberration and adoration". This almost-paradoxical depiction, of something that is both terror-inducing but pleasurable, evokes the sublime.

The 1940s and 1950s have become known as the 'Golden Age of Science Fiction'. This term is linked to the writer, John W Campbell (1910-1971), who analysed science fiction and determined what it 'ought' to be. Campbell was a writer for Gernsback but then became editor of *Astounding* magazine in 1938 (it later became *Analog*). The magazine became known for its colourful cover illustrations (Figure 4). But while Campbell too was looking for the descriptions of scientific possibilities in the stories he published, he emphasised the human character as being the essential part of any SF story. Campbell (1964:92) said, "it is the man, not the idea of the machine, that is the essence". This argument, that it is the human character that is the fundamental part of any SF story, is part of the development of speculative fiction.

[55] A group of Americans capture the ape in order to put him on display but he escapes, captures the woman and climbs to the top of New York City's tallest building where he is shot down and killed. However, it emerges the ape only took the woman in order to protect her.

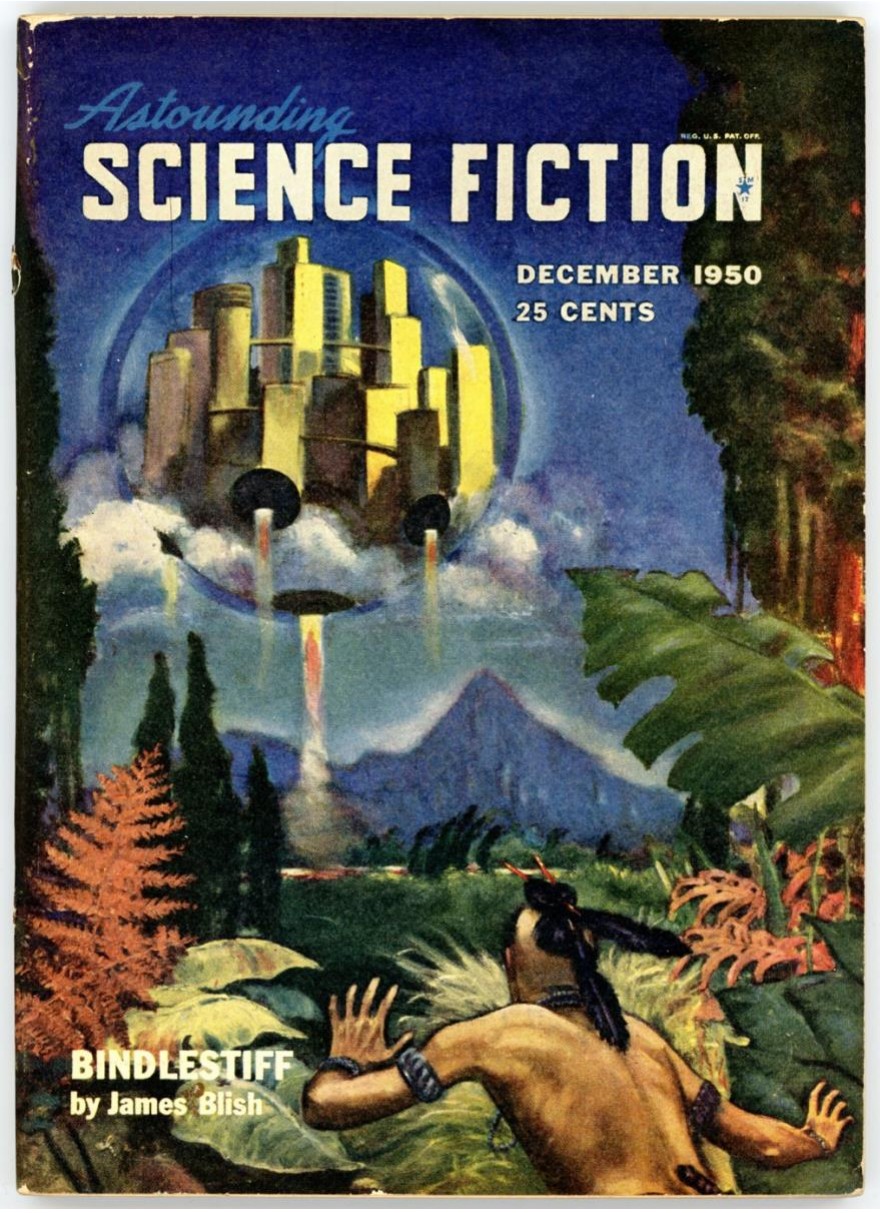

Figure 4: *Astounding* magazine cover, December 1950.
(Words Envisioned website).

Many of the 'greatest' and most well-known works of science fiction come from the 1940s and 1950s. One of the seminal authors of this era, and one of the most famous of all science fiction writers was Russian-born Isaac Asimov (1920-1990). Asimov's robot short stories established the important so-called "three laws of robotics",[56] used in books and films for decades to come. Asimov imagined robots not just as machines but as possibly 'humane' beings and even suggests the possibility of consciousness and autonomous thinking. The film, *I, Robot* is based on one of Asimov's stories. It concerns a humanoid robot, Sully, who is accused of violating

[56] The three laws or so-called "unbreakable code" of robots' state that: a robot may not harm a human and must act if it sees a human being harmed; a robot must obey a human's orders except where it violates the first law; and that a robot must protect itself as long as it does not contravene the first two laws (Gwyneth Jones 2003:166).

the first law by committing 'murder'. A detective who investigates discovers the robot has 'consciousness' and is able to make moral choices. The robot story is closely related to the technological sublime through the representation of fears about the future of humanity, and anxiety provoked by uncertainty. The theme is explored further in Chapter Six in the analysis of the film, *Tron: Legacy*.

Beyond the 1950s, one of the most important science fiction writers was Heinlein. Among his most notable works is *Starship Troopers* (1959), also adapted as a feature film in 1997. The story sees a group of teenagers being taken to a military boot camp where they learn to fight alien insects. The book, *Stranger in a Strange Land* (1961), is about a man who comes to Earth after being born on Mars and raised by Martians. Landon (2002:59) states Heinlein's "genius [was] to at once make the future almost boring in terms of its 'newness', but exciting in terms of the challenges and potential…". *Starship Troopers* paved the way for ultra-masculine action/adventure science fiction films that became popular in the 1980s, in which it is assumed that war is inevitable and that fighting for one's country (mostly the United States) is the ultimate noble act one can do in one's life. Films like *Terminator*, *Aliens* (James Cameron, 1986) and *Independence Day* are about fighting for 'good' as represented by the West.[57]

Across the ocean in post-war Britain, science fiction was often more pessimistic, as illustrated in *Nineteen Eighty-Four*. There appeared to be a tendency for British science fiction to look 'inward', at what could happen on Earth rather than elsewhere, while American science fiction of this time tended to look 'outward', at the universe beyond earth. Among the inward catastrophes were works written by Arthur C Clarke (1917-2008), who often focused on the child as alien and the demands of space travel. Clarke's background in maths, engineering and electronics gave his writing a scientific foundation, lending him credibility. One of his most famous contributions is to the screenplay of Stanley Kubrick's seminal science fiction film, *2001: A Space Odyssey*.

Johnston (2011:54-70) identifies four themes that are present in science fiction films between 1895 and the 1950s. The first – invention and creation – concerns the wonder at spectacles and scientific progress, from the steam train to photography to automatic weapons. "Each new invention appeared to enshrine scientists and inventors as the pinnacle of modern achievement, pushing the boundaries of human knowledge. Yet such brilliance also contained within it the possibilities of misuse, of destructive power" (Johnson 2011:54). Therefore, every

[57] The idea that one should fight for one's country and for the good of humankind is something that is also present in the film, *Interstellar*, which is discussed later in the study.

achievement has the potential to go horribly wrong and therein lies the possibility of evoking the technological sublime. This theme also relates to the more contemporary one of technophilia/technophobia.

The second theme is that of invasion. This does not necessarily refer to alien invasion even though HG Wells' *The War of the Worlds* was such a popular story during this time. Tales of the destructiveness of war (as reflected in World War I and World War II), as well as fears of an apocalypse being caused by an 'invasive' comet or meteor, were popular. The invasion on Earth by other humans was paired with large-scale destruction, particularly a threat of nuclear annihilation provoking terror and anxiety. More contemporary films often combine the theme of invention and technology with invasion, such as in the *Terminator* series.

One of the most popular themes during this time was that of exploration. Johnston (2011:65) states that this is an example of the influence of colonialism: "popular culture remained fascinated with what a journey into space would be like" while "Méliès' films provided the cinematic stimulation for such cultural fascinations with outer space voyaging, return to space exploration". Many of the elements seen in these films are still part of the iconography of the science fiction film: The spaceship, the theme of discovery and enterprise (exploration), as well as the emphasis on spectacle. Exploration and the theme of the journey are linked to the American technological sublime when the colonial project and the conquest of new, strange territories caused awe and wonder. The journey, particularly as related to time travel and space travel, is a key theme in science fiction film.

Finally, films up to the 1950s looked toward the future. For example, the 1909 film, *Le Progress de la Science en l'an 2000* ("Life in the Next Century", Gérard Bourgeois) takes place in the year 2010 where mechanisation rules all aspects of life. Much like today's coffee machines, bread is toasted automatically and brought to you while clothes appear at the push of a button. According to Johnston (2011:67), "[t]he vague unease about mechanisation in society is still present, as the film's protagonist rejects this mechanised utopia, casting 'all his electrical appliances to the winds with an air of boredom and disgust'". This theme remains an overarching one in SF and is key to the science fiction sublime, through humankind's fear of the unknown future.

While many films of the 1950s may still be open to ridicule, there were attempts at reflecting deeper thematic concerns even as some of the early precursors to blockbuster films could be seen. For example, one of the notable films of the decade is Robert Wise's *The Day the Earth Stood Still* (1951), which is about a peaceful alien who visits earth to deliver an important

message. At the same time, the influential 1954 Japanese film *Gojira* (Inoshiro Honda) – mistakenly translated in English as "Godzilla" – has been remade over a dozen times with multiple sequels. Fears of nuclear destruction in the 1950s are reflected in the story, as the creature in the original is a result of atomic testing. Don Siegal's 1956 *Invasion of the Body Snatchers,*[58] on the other hand, reflects a fear of the loss of bodily autonomy, a theme that is key to contemporary stories taking place in cyberspace and that concern technologies like artificial intelligence.

4.4 The 1960s and 1970s: New Wave, feminism and space opera

While many science fiction films were still considered amateurish during the 1960s and 1970s, there was a major attempt to explore the genre in a more philosophical way. The two decades saw the emergence of the so-called "New Wave" of science fiction writers, who defied traditional conventions of SF. These include Ballard, EC Tubb, Brian Aldiss and John Brunner. Landon (2002:150) explains that the New Wave saw "huge changes in the relationship of SF to mainstream writing, its engagement with cultural issues, its attitude toward science and technology, its treatment of sex, and its growing concern with the 'soft' sciences of psychology, sociology, and anthropology". New Wave writers wanted science fiction to be taken more seriously, to make the genre more literary. Ballard (2017:102) argues that "'[s]cience fiction should turn its back on space, on interstellar travel, extra-terrestrial life forms, galactic wars and the overlap of these ideas that spreads across the margins of nine-tenths of magazine s-f'". Building upon this is one of Ballard's most well-known observations, that "[t]he only truly alien planet is Earth" (in Westfahl 2012:137). Thus, science fiction began to look inward rather than outward as British science fiction had done earlier.

One result of this inward-looking science fiction was the exploration of violence. Ballard, for example, was fascinated by death. His novel, *Crash* (1973), relates a series of gory, bloody and violent staged car crashes, from which the characters draw sexual satisfaction. Baudrillard called *Crash* "'the first great novel of the universe of simulation, the world that we will be dealing with from now on: a non-symbolic universe, but one which, by a kind of its reversal of its mass-mediated substance (neon, concrete, cars, mechanical eroticism), seems truly saturated with an intense initiatory power'" (in Landon 2002:156). There is a cynicism and type of apocalyptic view in this work that permeates many science fiction films and *Crash* may be

[58] In the film, which could also be considered as body horror, aliens who look like humans kill everyone and replace them with perfect copies. Kurt Neumann's 1958 *The Fly* has a similar theme, with a scientist accidentally swapping his own head with that of a fly.

considered a type of dystopia. The idea of simulation is key in discussions around virtual reality and cyberspace, both of which are non-symbolic universes or non-spaces.[59]

Another point of fascination for the New Wave writers was the concept of messiah or saviour. The 1965 novel *Dune*, by Frank Herbert (1920-1986), tells of a young boy, Paul, who becomes persecuted on his desert-like planet when the emperor believes he may become a challenger to the throne. Much is made of the foretelling of Paul becoming the ruler, in the same way the Bible tells of prophets foretelling the birth of Christ. Later films like *The Matrix* and *Tron: Legacy* also used the idea of a messiah that can save mankind. Moreover, as mentioned earlier in this chapter, aliens too may be messiahs or saviour, for example, in *Close Encounters of the Third Kind*.

While the New Wave writers themselves eschewed that title, the 1960s and 1970s brought a marked change in the attitude towards science fiction as a genre. The British science fiction scholar, Edward James (in Landon 2002:152), summed up this tendency as one in which science fiction is no longer viewed as

> an exploration of the possibilities of humanity and science in the future or an educational introduction to aspects of science wrapped in the sugar coating of plot and adventure… SF should be a means to explore our own subjective perceptions of the universe and our fellow human beings.

Subjective perceptions, like the paranoia, angst and questioning of objective reality were embodied in the works of one of science fiction's most celebrated and prolific writers, Philip K Dick (1928-1982). His novel, *Do Androids Dream of Electric Sheep?* (1968), was the basis for one of the most acclaimed science fiction films of all time: *Blade Runner*. The central tenets of both the novel and film ask what it means to be human and how one can tell what is real and what is not. These two questions, regarding humanity's future and regarding virtual reality, are repeated throughout science fiction films going forward. Both are explored in the film analysis later in this study. What is salient to note is that fears about humanity's future and the impact of technology are key elements of the technological and digital sublimes.

Arguably, one of the most frightening things that can be experienced is living in a nightmare in which it is unclear what is real and what is not. The 1969 Dick novel, *Ubik,* explores the question of how one can know what objective reality is in a subjective world even further. The story is set in 1992 in a world in which telepathy is common. In this world, a big corporate

[59] This is discussed further in Chapter Five.

company employs “anti-psychics” to clients who want to preserve their privacy.[60] Landon (2002:114) identifies three interrelated themes in *Ubik*: “the multiple and subjective nature of reality, the distinction between human and machine, original and simulacrum, and… the explicit search for god”. *Ubik* may be seen as related to the sublime as neither the main character nor the reader knows what is real and what is not. It is the uncanny and the unknowable that are frightening in this work. The dissolution of the self is a concept that is a critical part of studying VR and cyberspace, and so, Dick’s works may be seen as a precursor to these ideas.

Importantly, at the same time as the New Wave emerged, so did feminist science fiction, disrupting the ‘boys’ club’ that was the genre. Several women writers fought to be taken seriously. Among the most well-known are Joanna Russ (1937-2011),[61] James Tiptree Jr (1915-1987) and Ursula K Le Guin (1929-2018). Coinciding with the second wave of feminism, these women not only sought to become science fiction writers, but also to change the representation of women characters in the genre, as men often portrayed women as aliens or monsters, or as passive objects. Instead, women SF writers highlighted how women are akin to the ‘alien other’ in which the fear of something/someone different is scrutinised (a theme explored more fully further in the study). What is notable is how these works relate to the feminine sublime. Zylinska (2001a:4) argues that the feminine sublime “constitutes an ethical moment in which an absolute and indescribable otherness is welcomed”. Similarly, feminist SF welcomes difference.

Tiptree Jr is particularly noteworthy as she deliberately pretended to be a man to subvert ideas around the SF genre.[62] Tiptree’s 1973 novel, *The Women Men Don’t See*, is the story of a mother and daughter, who along with another man are in a plane crash. At the same time, an alien spacecraft crashes nearby. The two women voluntarily decide to leave Earth with the aliens, something the man, Fenton, cannot understand. The mother, Ruth, explains that as women, they feel alienated on Earth:

[60] In this world, if someone is injured they can be rescued and placed in a suspended dream-like state where it is still possible to communicate with them. When one of the corporate teams is ambushed, their boss is placed in such a state. But as the novel progresses it becomes less clear who was actually placed in suspension. Did the team which survived really survive? Throughout the novel are scattered advertisements for various products, all called “Ubik” (a play on the word “ubiquitous”). In the final chapter, the Ubik advertisement claims that it is in charge of the universe, an ominous, god-like presence. The book is unsettling and uncanny, an almost-psychological piece of horror science fiction.

[61] Russ’ most famous novel, *The Female Man* (1975), tells the story of four women in parallel universes (including one which is a woman-only utopia). These women question what womanhood means after they meet each other. The title refers to one of the characters’ assertion that in order to gain respect a woman must forget her identity as ‘woman’.

[62] Tiptree Jr was the pen-name for Alice Sheldon. Her gender was only revealed in 1970, to the embarrassment of many, including Le Guin who prevented Tiptree from signing a feminist petition, because she was a ‘man’.

> Women have no rights, Don, except what men allow us. Men are more aggressive and powerful, and they run the world. When the next real crisis upsets them, our so-called rights will vanish like – like that smoke. We'll be back where we always were: property. And whatever has gone wrong will be blamed on our freedom, like the fall of Rome was. You'll see (Tiptree [sa]:20).

One of the Le Guin's most notable works is 1969's *The Left Hand of Darkness*. The story takes place on a planet whose inhabitants are "ambisexual", with no fixed sex. Le Guin (in Landon 2002:133) stated that "[i]f you deny any affinity with another person or kind of person… if you declare it to be wholly different from yourself – as men have done to women, and class has done to class, and nation has done to nation – you may deify it; but in either case you have denied its spiritual equality and its human reality". The alien other represents something unknowable, something that may be revered (though there is still an element of fear), like the messiah mentioned earlier, or something that is repulsive and hated. Again, this links to the terror necessary to invoke the sublime.

While new themes were being explored in literature, along with a more thoughtful and metaphysical approach, science fiction film between 1960 and the 1990s, became an increasingly visual spectacle with new special effects being used. These developments are crucial to the science fiction film sublime, as is explored later in the study. For example, George Pal's (1908-1980) *The Time Machine* (1960) used stop-motion photography to convey the rapid change of time from a time traveller's point of view. Stanley Kubrick's *Dr Strangelove or: How I Learned to Stop Worry and Love the Bomb* (1963) was shot in a documentary style, using a handheld camera and quick cuts.

In addition to special techniques, a new kind of lexicon and iconography of SF cinema came into being. The 1962 half-an-hour black-and-white film *La Jetée* ("The Jetty") by Chris Marker[63] is a time travel story in which almost all the visuals are "a succession of photographic images, held on the screen for varying lengths of time... The effect is to concentrate the viewer on the power of 'the image'" (Roberts 2005:268). The power of the image is a focus on the visual aspects of science fiction film. Therefore, it is during these two decades that SF really begins to favour special effects.

Perhaps the seminal science fiction film of all-time is Kubrick's *2001: A Space Odyssey,* released in 1968. The film is acclaimed in almost all aspects, from the plot to the visual effects (that continue to be praised) and sound design, and because of this, it is arguably one of the first science fiction films that can truly be considered as part of the science fiction sublime.

[63] This was later remade into *Twelve Monkeys* (1996) by Terry Gilliam and into a television series in 2015.

Therefore, it is worth taking a closer look at the film. There are four parts to the story. The first is set in prehistoric Africa when the appearance of a black monolith serves to make a group of ape-like hominids more advanced. One of the most famous cuts from part one to part two is when one of the hominids throws an animal jawbone into the blue sky. As the bone begins to fall the camera seamlessly cuts to a spaceship moving through outer space, a harmonious transition from the familiar (Earth) to the unfamiliar (space).

The second part sees a space-traveller, Dr Floyd, journeying to the moon where a black monolith has appeared. The monolith is sending a signal to Jupiter. The third section sees the spaceship Discovery travelling to that planet to investigate. The ship is partly overseen by the onboard computer, HAL (mentioned earlier in the chapter), which breaks down into insanity after a malfunction, becoming malevolent and murderous. The interior of the ship is one that has become synonymous with many spacecraft in SF: Monochromatic with plenty of white and light, giving it a clinical feel akin to that of a scientific laboratory (Figure 5).

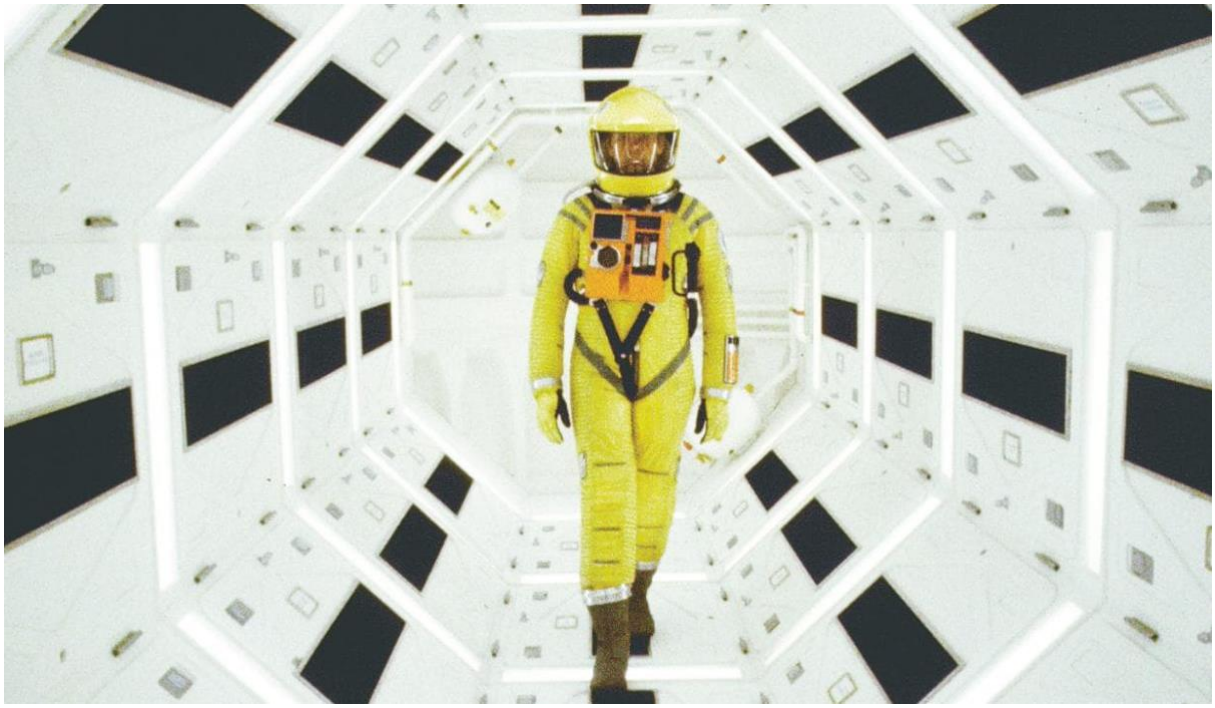

Figure 5: The interior of the spaceship, Discovery, *2001: A Space Odyssey*, 1968.
Screen shot by author.

The fourth and final part of the film sees one of the crewmen from the Discovery, Dave Bowman escape from HAL and finding the massive monolith on Jupiter. He discovers that the monolith is a portal and he is transported through an interstellar passage composed of what Roberts (2005:270) calls “trippy, multi-coloured images. At the end of this psychedelic transcendence he finds himself in an oddly lit Louis Quinze suite of rooms, where – in, once

again, beautifully elongated and poised shots – he grows old, before being reborn as a 'star child', a luminous and apparently enormous foetus in orbit around the Earth" (see Figure 6). There is a sense of falling through the passage, a movement that is later echoed in the film, *Interstellar*. The rebirth has religious overtones and Kubrick himself is cited (in Seed 2011:14) as saying that "'the concept of God is at the heart of'" the film.

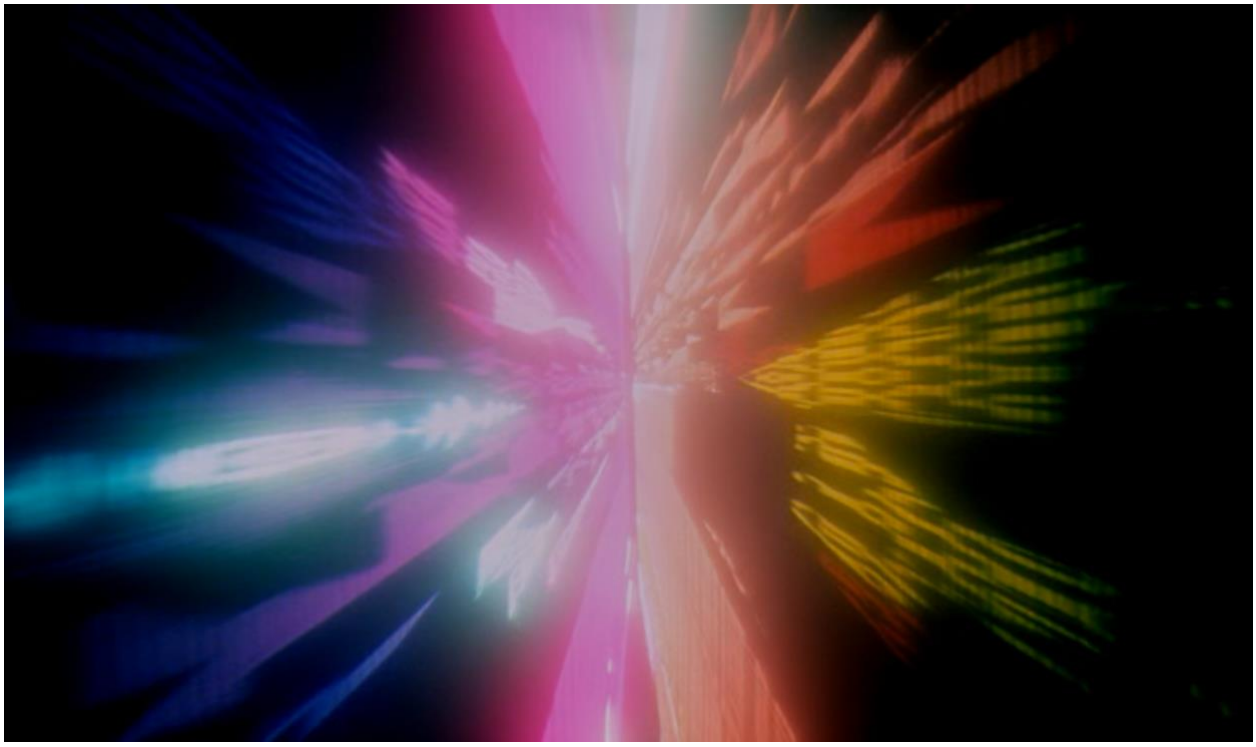

Figure 6: Part of the Stargate sequence, *2001: A Space Odyssey*. 1968.
Screen shot by author.

2001 remains a film that evokes the sublime through a visual "sense of wonder". Johnston (2011:88) calls the film a "pure science fiction and special effects spectacle", creating new "visual effects techniques, from early motion control to front projection and slit-scan for the final Stargate sequence". The vastness of space, the impossibility of measuring it and putting it on a screen are made manifest in a long sequence showing the Discovery in space and while docking, it is accompanied by Johann Strauss II's *The Blue Danube* waltz (1886).

At the same time, iconography like the black monolith may recall the sublime. It is a strange, unknowable object, the origin and purpose of which is unexplained; the object is almost immeasurable. The monolith becomes the conduit through which the crewman reaches 'transcendence' and rebirth, a kind of mind-bending, karmic evocation that is hard to understand or define. With minimal dialogue to explain what is happening on screen, it is up to the audience to infer meaning from the stunning visuals. The overwhelming vastness of

space in the film recalls Kant's mathematical sublime, while the third part of the story, involving HAL, relates to the technological sublime and the fear of what machines may be able to do in future.

Kubrick has been praised for his grace, as being "the first director to convey that actual space-travel is (relative to the enormous distances that must be covered) achingly slow" (Roberts 2005:269). Bukatman (1995:287) argues that the film concerns a "phenomenological instability that has always been more or less present in science fiction cinema". That instability is connected to the sublime's disruption of self, that is, when the self is overwhelmed, awed, arrested by something, in *2001*'s case the infinity of space, the strange monolith, the fear inspired by HAL and the interstellar trip that represents transcendence.

The 1960s also saw some other films that had philosophical messages. *Planet of the Apes* (Franklin J Schaffner 1963) was a blockbuster combining action and special effects with a storyline that commented on class and race relations. The film saw the beginning of the possibility of franchises, due to its open-ended narrative – a pre-cursor of how science fiction films would be in the future. *Planet of the Apes* became a television series in the 1960s and was made into a series of films between 2001 and 2017.[64]

But by the end of the decade, some new subject matter was needed. The moon landing in 1969 took space travel from a novelty to reality. The 1970s included the rise of the second wave of feminism and the fight for gay rights. The science fiction films of the 1970s explored themes like "alien infection (*The Andromeda Strain* Roberts Wise 1970), population overcrowding (*Soylent Green* Richard Fleischer, 1972), the rise of dictatorial societies (*Conquest of Planet of the Apes* J Lee Thompson, 1972), surveillance technology (*THX 1138* George Lucas 1971), post-apocalyptic survival (*The Omega Man* Boris Sagal 1971) and the psychological impact of first contact with a totally alien life form (*Solaris* Andrei Tarkovsky 1973)" (Johnston 2011:93). These stories came amid a time of social upheaval: The Vietnam War, the Watergate scandal, and the deterioration of race relations over the fallout from the assassination of Martin Luther King Jr that saw the rise of the more militant Black Panthers. Other notable science fiction films of the time include Kubrick's adaptation of the ultra-violent *A Clockwork Orange* (1971) and Lucas' first feature film *THX-1138*. The latter was reminiscent

[64] Television became a very popular medium for SF during this time. The most notable and beloved television series were *Star Trek* (1966-69) and the British series, *Doctor Who* (which has seen several come-backs since 1963). *Star Trek* follows the inter-species crew of the USS Enterprise, which seeks out new life and new civilisations. *Doctor Who* features a humanoid alien, who travels through time and space having adventures and policing these 'time-ways'.

of Kazimir Malevich's paintings in its use of, or lack of, colour. Bald actors in white suits are seen walking through white corridors and rooms, recalling Malevich's "White on White" (1918).

In 1977, Lucas created the first of one of the most popular film franchises of all-time, cementing the popularity of the space opera with *Star Wars: A New Hope*. At the time, it was the highest grossing film in movie history with $926-million globally. While some critics may have viewed it as a 'dumbing down' of science fiction, it popularised the genre in a completely new way. Lucas also created the imagery that has become convention in SF since then: The look of spaceships, speedy travel through space, dystopian future landscapes and a variety of different alien species. *Star Wars* and its sequels all follow a basic hero story, as put forward by Joseph Campbell. What made it awe-inspiring was the spectacle of the film, with a new sense-of-wonder at the light-sabre battles, the spaceships and the sense of depth of space created in the opening credits, what Bukatman (1995:255-289) and Burke refer to as the "artificial infinite" that evokes the sublime.

The end of the decade also saw the rise of the science fiction-horror film with Ridley Scott's *Alien* (1979). The film depicts the alien creature as distinctly and disturbingly violent, menacing and monstrous, with the kind of special effects and visual markers unseen until then, like the dark, cavernous space of the ship (repeatedly described as 'womb-like') and the alien with its rows of teeth and tentacles.[65] The creature is decidedly organic and the film is a visceral experience, inducing shock and revulsion in a scene of inverted birth when an alien organism bursts forth from the chest of a male character. This is what Creed (1990b:217) calls as "the ultimate scenario of powerlessness, the ultimate violation of the body", especially because it is happening to a man. It is the visceral nature of some science fiction films that may be conducive to the feeling of the sublime through proprioception, something that is discussed further under special effects in the next chapter.

4.5 From the 1980s to the new millennium: Cyberpunk to superheroes

The 1980s saw the emergence of a short-lived but influential sub-genre, namely cyberpunk. Though William Gibson's seminal novel, *Neuromancer* (1984), is seen as having launched this sub-genre, the term itself was coined by Bruce Bethke in the short story "Cyberpunk" in 1983, a year before *Neuromancer*'s publication. What made the novel ahead-of-its-time was

[65] The film is often discussed with a feminist reading, with concerns how a woman's body is portrayed as the monstrous unknown or the alien Other. This is something that is echoed in the film *Under the Skin*, which is discussed in Chapter Six.

its vision of cyber-culture, and what the virtual might 'look' like. It has become something of a legend for its definition of the term "cyberspace" as

> a consensual hallucination experienced daily by billions of legitimate operators, in every nation, by children being taught mathematical concepts... A graphic representation of data abstracted from banks of every computer in the human system. Unthinkable complexity. Lines of light ranged in the nonspace of the mind, clusters and constellations of data. Like city lights, receding... (Gibson 1986:51).

While *Neuromancer* launched cyberpunk in literature, it was preceded by and appears to be influenced by the film *Tron* (Steven Lisberger 1982), which explores the 'plugged-inness' of Virtual Reality also depicted in *Neuromancer*, as well as the images of the dystopian cityscapes seen in *Blade Runner*.

One of the most stunning visual science fiction films made and one of the most discussed is *Blade Runner*. Although not a box office success, it became a cult-classic, partly because of its overall look that draws distinctly from film noir to create a cyberpunk vision: A dark cityscape with brightly-lit and garish neon signs where it often rains (Figure 7). The overarching question of the film is: What does it mean to be human? The film is a good example of the technological sublime: Both the wonder of technology and the fear thereof. Bukatman (2012:15) says the vision in the film "somehow both makes and unmakes the self…, creating a dynamic between a centred and autonomous subjectivity (eye/I) and the self as a manufactured, commodified object (Eye Works)".

Cyberpunk is set in mostly dystopian urban worlds. The settings are claustrophobic and the palette dark, with the only colour often being advertisements in neon, an indication of consumerism. The sub-genre often offers a bleak view of the pervasiveness of computing and the Internet. Conceptually, it conceives of a way in which humans can 'plug in' to the unseen world behind computers: The data and the virtual spaces. It posits the concept of reality against unreality.

Bruce Sterling, seen as the cyberpunk 'spokesperson', identifies (in Landon 2002:160) the thematic concerns of cyberpunk/new wave as "'the theme of body invasion: prosthetic limbs, implanted circuitry, cosmetic surgery, genetic alteration. The even more powerful theme of mind invasion: brain-computer interfaces, artificial intelligence, neurochemistry – techniques radically redefining the nature of humanity, the nature of the self'". The idea of the (dis)embodied self is key in cyberpunk, because not only are there concerns about altering the body, but of radically altering that which many believe to be even more important: The

mind, the seat of consciousness. Cyberpunk can be thought of as a science-fictional Cartesian split: Meat (body) versus mind.

Figure 7: The dark, grimy, rainy cityscape of cyberpunk, lit by garish neon lights, *Blade Runner*. 1982.
Under the Hollywood Sign.

Its settings aside, cyberpunk was yet another way in which the fear of technology in the sublime is represented. Furthermore, cyberspace as represented in cyberpunk is about transcendence. As Mosco (2004:2-3) argues, cyberspace is about "stories that animate individuals and societies by providing paths to transcendence that lift people out of the banality of everyday life. They offer an entrance to another reality, a reality once characterised by the promise of the sublime". Cyberspace is not a finite 'place'. It is a non-place or imagined space in which data, invisible to the subject but represented by ones and zeros, seemingly 'floats'. Like outer space, cyberspace is infinite, limitless. These concepts are represented in science fiction, through special effects. As stated in Chapter Two, Bukatman (1995:267) argues that SF's very function is to construct the infinite which lies at the heart of the sublime experience.

Cyborgs permeate much of cyberpunk fiction. Importantly, Haraway (2000:292) states that humans are already cyborgs, something which gives humans "their ontology". As discussed under the feminine sublime in the previous chapter, Haraway (2000:292) argues *for* the confusion and erasure of the border between human and animal, human and machine. This is because the cyborg is "post-gender". Furthermore, Haraway's statement reflects the

technological sublime: “Our machines are disturbingly lively, and we ourselves frighteningly inert” (2001:294). Technology during the 1980s was also still viewed as something that could be out of control, particularly robots and cyborgs, again raising the question about what it means to be human, for example: What is the difference between artificial intelligence and a biological original?

Tron established a visual iconography for the representation of the kind of cyberspace described in cyberpunk literature, especially *Neuromancer*: Grids, imaginary representations of data in a dark space (see Figure 8), neon lights against dark backgrounds and dystopian cityscapes. Films like *Blade Runner* and *Terminator* also explore androids or robots that look like humans and are sometimes indistinguishable from them.

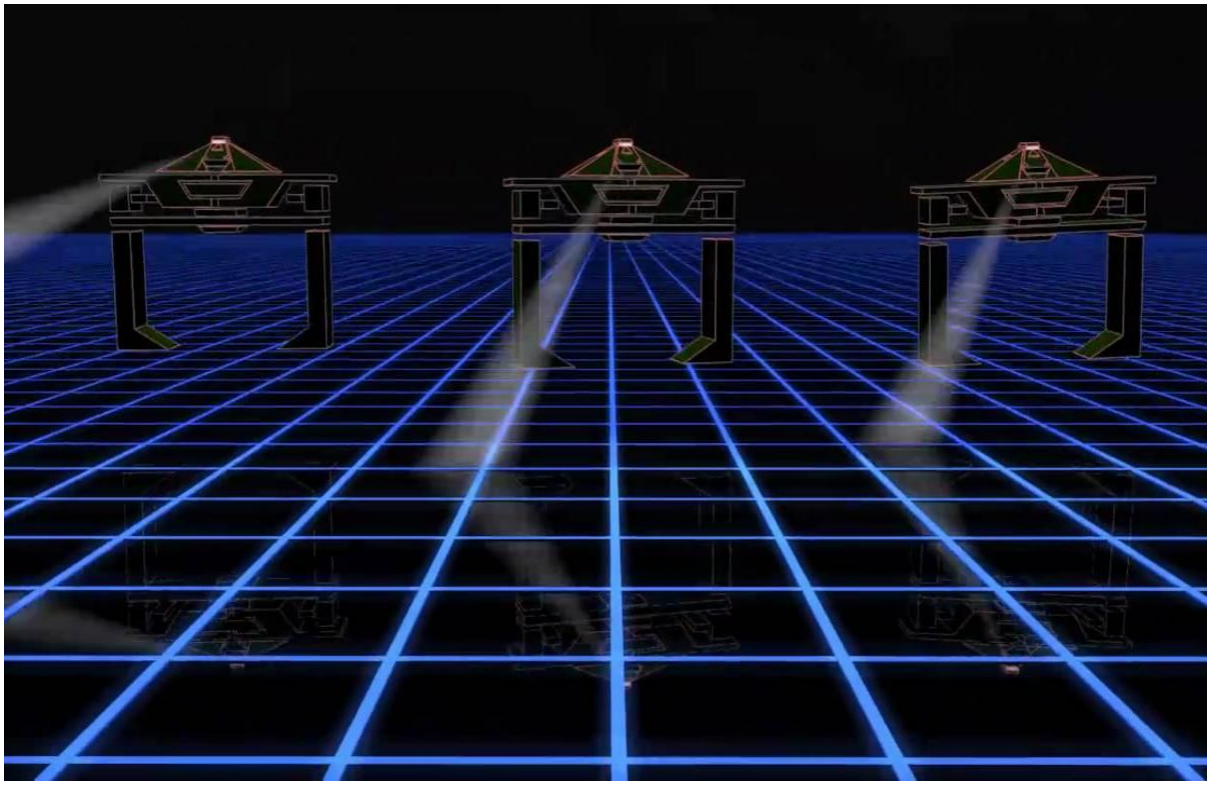

Figure 8: Grids that denote data and neon lights against a dark background are representations of cyberspace and information, *Tron*. 1982.
Screen shot by author.

The first three *Terminator* films – *Terminator*, *Terminator 2: Judgement Day* (James Cameron 1991) and *Terminator: Rise of the Machines* (Jonathan Mostow 2003) also created a visual lexicon and important themes and storylines like that of the cyborg and time travel/time-loop. The evil Terminator, played by action-star Arnold Schwarzenegger, comes from the future in

which machines rule the world and are destroying humanity.[66] The obvious message of the film is a warning that humankind is creating technologies that will in future cause harm and threaten humanity. The tech-noir feel of the *Terminator* films, as well as *Blade Runner* and *Tron,* was also reflected elsewhere in the world, like Japan.[67]

From the 1980s onwards, the impact of the trend of the blockbuster superhero film emerges, including a series of Superman films (beginning with Richard Donner's *Superman* in 1978), Batman films (beginning with an iconic film by Tim Burton in 1989), *Spider-Man* (the first one, directed by Sam Raimi, being released in 2002), a flurry of *X-Men* films and more recently, *The Avengers* (Joss Whedon 2012) and *Justice League* (Zack Snyder 2017). At the same time, parodies of science fiction films showed an awareness of SF conventions like *Mars Attacks* (Tim Burton 1996), *Men in Black* (Barry Sonnenfeld 1997), *Galaxy Quest* (Dean Parisot 1999) and *Manborg* (Steven Kostanski 2011).

Stephen Spielberg has dominated the 1990s and 2000s with films like *Jurassic Park* (1993) – the first in a franchise of now five films with more on the way – about 'tourists' trapped in a park for dinosaurs that were created from extracting DNA from fossils. The film *AI: Artificial Intelligence* (2001) was based on Brian Aldiss' story about a robotic boy who has human feelings and who becomes a substitute child for a grieving couple. And, 2002's *Minority Report* was an adaptation of a Philip K Dick story about the future of policing, in which pre-cognitive humans are able to predict crimes before they happen, and people are therefore arrested before these crimes can be committed.

4.6 Towards the new millennium and beyond: The impact of digital technology and special effects

From 1990, science fiction film became ever more mainstream amid the proliferation of Computer Generated Imagery (CGI). This is seen, for example, in a film franchise that created its own pioneering visual language, which was later appropriated by other films, namely The Wachowskis' *The Matrix* trilogy (the first film was released in 1999), which again questions the

[66] He travels to the present to kill Sarah Connor, to stop her from conceiving a son, John, who will lead a rebellion that will win the war against the machines and the computer system that rules them, Skynet. Also from the future comes a man named Kyle, sent by Sarah's future son to warn her and protect her. Kyle sleeps with Sarah becoming John's father, creating a time paradox.

[67] During the 1980s and into the 1990s, a kind of obsession developed with Japanese animé (animated films based on manga comics), like Katsuhiro's *Akira* (1988) and Mamoru Oshii's *Ghost in the Shell* (1995) – which saw a 2017 live-action remake by Rupert Sanders that was a box-office bomb (partly due to a controversy over the white-washing casting of Scarlett Johannson in the lead) despite it being a visual stunner, comparable to *Blade Runner*. These animé films all have a cyber-punk/tech-noir feel to them.

nature of reality. The most celebrated effect, used in the first film, is the invention of so-called bullet-time (Figure 9). This refers to camera shots where bullets are fired at the heroes and the frame appears to freeze in time even as it rotates 180 or more degrees around the actors, thereby following the spinning trajectory of the bullets. This is an invitation for the viewer to be drawn 'inside' the 2D space of the screen.

Figure 9: Neo (Keanu Reeves) dodges bullets in bullet-time, *The Matrix*. 1999.
Screen shot by author.

The advent of the new millennium saw an explosion of hand-held technologies. While cellphones already existed, the devices were becoming smaller and features like cameras started being added. Social media changed the way people interacted and communicated. This had an impact on filmmaking, in particular, science fiction film. Johnston (2011:106) states that increased access to video cameras, cellphone cameras and cheaper desktop software has helped small, independent filmmakers create feature-length films that combine a low-budget with state-of-the-art digital effects, like Gareth Edwards' 2010 film, *Monsters* which was made for less than $500,000. Edwards created the visual effects himself using off-the-shelf Adobe software – ZBrush, and Autodesk 3ds Max. Edwards created all 250 visual effects shots, working out of his bedroom. Despite its challenges, the film won critical acclaim and several awards including Best International Film at the 37th Saturn Awards.

Another effect that emerged during the 2000s is so-called "'steadi-cam' action sequences" which results in "shots that followed protagonists through a sequence in one long take or which were edited into a fast-paced image stream" (Johnston 2011:106). These kinds of shots have

often been used in action-thrillers such as *The Bourne Supremacy* (Paul Greengrass 2004), the newer Bond movies and in the science fiction genre, especially in superhero movies.

At the same time, 'found footage' has become a prominent staple, often used in low-budget films. One of the first films to popularise this technique is the low-budget hit, *The Blair Witch Project* (Daniel Myrick & Eduardo Sánchez 1999). The technique is both a visual effect and story-telling device, in which the premise is that the found footage is the only thing that survived a horrible event. It uses shaky camera work and some of the footage is often grainy as if shot on a cheap handy-cam. Science fiction films including *Cloverfield* (Matt Reeves 2008) and *Europa Report* (Sebastián Cordero 2013) used the same technique. Other films, like *District 9* (Neill Blomkamp 2009) married advanced special effects and live action to create a realistic feel, for example, the grittiness of the informal settlement in which the aliens live.

There is also a move towards near-total CGI films that are not classified as animation, like James Cameron's *Avatar* (2009), in which humans connect their minds to genetically-engineered bodies to interact with alien species on a distant planet. Actors wearing motion-capture suits make the animated figures seem more real. The film was shot in 3D and was the first feature film to be shown in 3D in South Africa. As CGI and 3D increase, it seems much of science fiction is becoming largely dependent on that. Annette Kuhn (1990:7) notes that often the visual spectacle becomes an end in itself – "spectacular visual effects and sounds temporarily interrupt the flow of the narrative, inviting the spectator to contemplate, with awe and wonder, the vastness of deep space or the technological miracles of future societies". Here, the movement is towards the sublime.

In 1995, Landon (2002:149) wrote that "while it is too early to predict the nature of SF at the beginning of the next millennium, too early to claim whether or not the genre can survive an increasingly electronic culture, it is possible to sample its diversity and vitality in the 1990s". But, as shown by the previous examples, not only has the genre survived electronic culture, it has become embedded within it. The proliferation of remakes, reboots and sequels are indicative of nostalgia, not just for science fiction of a certain 'original' kind, but also for the kind of sublime feelings evoked by these films, that may simply be lacking in the other kinds of science fiction films currently being produced.

But aside from the reboots, science fiction films have also been increasingly recognised as a worthy 'art form' in film and literature, for example, by making critically-acclaimed novels, like Cormac McCarthy's 2006 speculative fiction novel *The Road* (John Hillcoat 2009), into feature films. More recently, *Arrival* was nominated for an Oscar. Instead of being action-driven with

spectacular battles and chase sequences, the film is a drama with a science fiction premise and setting, raising philosophical and existential questions about humanity. Other dramatic science fiction films that have won awards outside of science fiction film festivals and that have been nominated for Oscars, include *Eternal Sunshine of the Spotless Mind* (Michel Gondry 2004), *The Martian* (Ridley Scott 2015), *Her* (Spike Jonze 2013), *Gravity* (Alfonso Cuarón 2013) and *District 9*. In 2018, Guillermo del Toro's science fiction fantasy, *The Shape of Water,* became the first SF film to win the Oscar for Best Picture.

Landon (2002:110) argues that one of the significant developments in science fiction in the twentieth century is that SF turns the lens on itself by exploring "a knowable and objective reality, and on its ostensible confidence in the immutability of gender relations… particularly since the lessons of quantum physics more and more and more seem to support a worldview that embraces indeterminacy as a basic principle". This is something that is seen in the film *Interstellar*. In some films, science and technology are not central to the plot but feature somewhere in the 'background'; they are not the premise but the frame or setting (milieu), or a metaphor. An example of this is *Never Let Me Go* (Mark Romanek 2010) based on the 2005 novel by Kazuo Ishiguro. The story is about a group of children who grow up in a boarding school that seems innocuous but once grown they discover they were only conceived and brought up to be harvested for organs in order to help other people live longer. If one of them manages to survive four surgeries, they gain their freedom, though this is something that rarely happens. The story focuses on a group of four friends, their relationships and hopes and dreams, rather action-sequences or special effects.

4.7 SF's affinity with special effects

Science fiction has what could be described as its own 'language' or 'grammar'. The late science fiction novelist, Ursula K Le Guin, argues for what is termed 'science fiction thinking'. In her introduction to the *Norton Book of Science Fiction,* Le Guin (in Landon 2002:10) states that this thought process considers:

> Materialistic cause and effect; the universe conceived as comprehensive object of exploration and exploitation; multiculturalism; multispeciesism; evolutionism; entropy; technology conceived as intensive industrial development; permanently developing in the direction of complexity, novelty, and importance; the idea of gender, race, behaviour belief as culturally constructed; the consideration of mind, person, personality, and body as objects of investigation and manipulation: such fundamental assumptions of various sciences or of the engineering mind underlie and inform the imagery and the discourse of science fiction.

Significantly, as Grant (2004:19) states, cinema as a medium in general shares three central aspects with the science fiction genre – space, time, and the machine: “In cinema, narration proceeds by manipulating time and space, [elongating] and condensing both for dramatic and affective purposes… The cinematic machine… is a device capable of imagining and ‘building’ (through special effects) other machines infinitely more sophisticated than itself”. Therefore, the technology of the cinema works in the same way that time travel does, that is, by transporting the viewer to “a virtual environment primarily experienced visually”, while the temporal mobility in both the time travel narrative and in cinema “allows the subject to encounter what is alien, yet necessarily familiarises this as a consumable media experience” (Bignell 2004:136). This consumable media experience turns the sublime into a commodity, as if the only way for the subject or viewer to access the sublime is through a mediated experience.

The commodification of the sublime is visible in the voyeuristic consumption of cinema. Grant (2004:22) states the “scopophilic pleasure of cinema is mobilised most intensely in special effects images, as viewers are swathed in their power”. As referred to in Chapter Three, scopophilic pleasure is taking gratification in voyeurism, something that can occur in the dark of a cinema with the spectator being given “an illusion of looking in on a private world” (Mulvey 1999:836). Anne Friedberg (in Bignell 2004:137, emphasis in original) takes this idea further by referring to a “‘mobilised virtual gaze’” which is “‘not a direct perception but a *received* perception mediated through representation”, “‘a gaze that travels in an imaginary *flânerie* through an imaginary elsewhere and an imaginary elsewhen’”.

In other words, the cinematic viewer becomes the *flâneur*, which is a person who strolls around while looking. Similarly, the viewer of science fiction film is transported to extraordinary worlds in which he or she may ‘stroll’ around and observe. In science fiction the spectator is often thrown into a virtual experience, apparently moving along with the camera into a black and dimensionless screen. Jonathan Bignell (2004:137) states that it is “as if the spectator is travelling through space, plunging headlong into black emptiness with the cinema screen functioning as a window onto the journey”. This travelling through space evokes the sublime because the viewer is dislocated from the present and is transported to another, technologically– and virtually-mediated present, i.e. taking the viewer out of him/herself.

Sound is also an important element that has some noticeable characteristics when it comes to science fiction. For example, ‘robotic voices’, that is, the voice of a computer or android, often have a tinny, metallic sound. Music may also be iconic like the use of Johann Strauss’ waltz, *An der schönen blauen Donau* (“On the Beautiful Blue Danube”), during the long space-

station docking scene in *2001* or the recognisable theme tunes from *Star Wars* and *Star Trek*. Another example of how sound is used as a special effect is in *A Clockwork Orange* (1971), in which spoken language is used to evoke a sense of wonder. In the film, "Nasdat" is an invented language that mixes some English with Anglicised Russian creating a strange, rhythmic dialect that sounds like a kind of poetry.

However, the simplest way in which to look at what makes a film 'science fictional', is considering the visuals. SF has a certain 'feel' and 'look' to it. Sobchack (1987:87, emphasis in original) states that the

> visual connection between all SF films lies in the consistent and repetitious use not of *specific* images, but of *types* of images which function in the same way from film to film to create an imaginatively realized world which is always removed from the world we know or know of. The visual surface of all SF film presents us with a confrontation between and mixture of those images to which we respond as 'alien' and those we know to be familiar.

In other words, science fiction cannot only show the viewer strange and wondrous images that are unfamiliar. These images must be placed in a context that is comparable to the familiar, to *a priori* knowledge. For example, a wondrous spaceship may have a canteen with tables and chairs, things the viewer can identify with. Therefore, some familiarity is necessary so that an audience knows when to respond with the "wow" that comes with showing the strange and never-seen-before.

As can be seen from this description, 'science fiction thinking' is complex and considers multiple themes. One way in which to categorise readings of the language of science fiction film is by considering the functions of the visuals. Sobchack (1987:89-136) identifies four types of visual functions: The speculative, the extrapolative, subversion of the landscape and dehumanisation of humans.

The speculative function concerns the credibility or believability of the film. Sobchack (1987:91) argues that "[o]n the most obvious level, the SF film attempts to meet our expectations by using the magic of design and special effects to show us things which do not exist, things which are highly speculative, which astonish us by the very fact of their visual realization on the screen since they have no counterparts in the world outside the theater". The effects, therefore, cause the state of wonder in the spectator necessary to induce the experience of the sublime because the visuals go 'beyond' the imagination and understanding. The effects are often unfathomable (causing awe and wonder at how the filmmakers created them), boundless and therefore, sublime.

The second way of categorising the visuals in films is extrapolative. Unlike the completely fabricated and fictional alien locus or geography in the speculative, there are some things present in science fiction film that already exist in reality. These things are not imagined but nevertheless, they are inaccessible to the viewer, hence they are still 'alien' or unfamiliar when presented in film. What is noteworthy is that this 'de-familiarity' may relate to the uncanny sublime explored in the previous chapter. Science fiction film presents the viewer with something – a story or object – imaginary or fictional, and through special effects, makes it look strangely familiar or real.

Another way in which extrapolative visuals work is by providing the viewer with ways to 'see' things otherwise unseen. For example, the particles studied in physics, particularly in quantum physics, are invisible to most people (bar the scientists who may observe their effects with equipment like the hydron particle collider). This unseen and inaccessible world is explored in *Interstellar*, for example, which considers quantum physics, as well as in *Tron*, which explores the world of virtual reality and cyberspace, both of which are also 'invisible' and which need to be represented by something fictional or made up. The cinema audience is able to view representations of both the overwhelmingly small and overwhelmingly large in SF film. Both of these types of representations (small and large) can be equally wondrous, as argued by Burke in his list of things that may evoke the sublime (as discussed in Chapter Two). When the viewer is allowed to enter an unseen world, such as the circuitry of the computer, for example, "we become omniscient and omnipotent as gods" (Sobchack 1987:103). Hence, the viewer becomes something superior. This, in turn, relates to Kant's argument that those who experience the sublime are able to do so through Reason, through realising that they are 'above' what is happening and at a distance from that which is terrifying.

The third way of categorising visuals is in the subversion of the landscape. As previously argued, the setting or landscape of SF film may be dystopian or utopian. Some science fiction films are optimistic about technological progress and about making discoveries of the unknown, while others present technology as something to be feared. Sobchack (1987:111) states that SF films that use the magic of special effects to take the viewer "out there" into space are visually optimistic, for example, in *Star Wars*: Despite the war between the rebels and the evil Empire, space is depicted as something positive and many 'alien' creatures are friends. On the other hand, hostile landscape films are often filmed in desert or beach locations, or in winter deserts like the Arctic. In such films, there is often an achievement of infinity of landscape, with no real horizon as everything looks the same.

Finally, science fiction employs the dehumanisation of people as a device in which the text can be read. This is where the "'friendly people next door' [become] cold and passionless alien beings" (Sobchack 1987:120). An example of this is *The Village of the Damned* (John Carpenter 1995) in which women in a village start giving birth to evil alien children, disrupting the idea of children as innocuous or innocent. Another example is *Invasion of the Body Snatchers* in which a group of aliens takes over the bodies of humans, replacing people with 'soulless' clones. The dehumanisation of people (as noted in zombies) can be about real humans who are turned into aliens, monsters i.e. aliens who already look human, and robots or cyborgs that are made to look human. The fear presented in this categorisation is that real humans will not be able to tell who is an enemy or who to fight against, thereby creating anxiety. This categorisation is something that is explored in *Under the Skin* in which the alien invader wears a human skin. The fear represented is that of a loss of human agency.

CHAPTER FIVE: TOWARDS THE SCIENCE FICTION FILM SUBLIME

This study suggests, through my research, that the science fiction sublime (especially as articulated by film) comprises elements of various iterations of the sublime. This includes Burke, Kant, the technological, the uncanny, special effects, the contemporary and cinematic sublimes. This chapter aims to explore these aspects of the sublime in order to show how they constitute the SF sublime.

Firstly, the *feeling* of the science fiction sublime may be evoked non-diegetically through the show-stopping and spectacular visual special effects (and also through some sound effects that come from within the film) that draw attention to themselves. Secondly, the sublime in SF may be *represented* diegetically through the storyline and themes.[68] Some visual effects also do not draw attention to themselves and may be considered to fall within the diegesis of the film. Dan North, Bob Rehak and Michael S Duffy (2015:6) state that it is possible for spectacular effects to support a story but also to contribute "to the broader making of meaning beyond the diegesis".

This chapter takes a closer look at science fiction film's close affinity with special effects and how this may evoke the science fiction sublime. Furthermore, I will examine three themes that are often used to represent the SF sublime, namely alienation/the Alien Other, technophobia/technophilia, and infinity along the space-time continuum.

5.1 Special effects and the science fiction sublime

One of the most common ways of defining science fiction film is by looking specifically at the genre's technical aspects, namely the visuals (special effects), sound, set design and costumes. Special effects, in particular, are a key area of study in science fiction film.[69] Bukatman (1995:265) states that special effects in science fiction are akin to the sublime in that it is "especially effective at bringing the narrative to a spectacular halt", which reintegrates "the virtual space of the spectacle with the physical space of the theatre". Special effects can serve either to 'ground' the spectator, for example through effects that create a visceral experience, like a sudden movement that causes the viewer to jump or increases the heart rate, or the effects can result in something that almost erases the feeling of being in the here

[68] It is important to note that not all science fiction films either evoke or represent the sublime. This is partly because the creators of the certain films' intentions are different, or because different viewers experience various texts differently.
[69] For brevity, science fiction film will in this chapter be referred to simply as science fiction or SF.

and now. For example, 3D special effects can serve to draw the viewer 'into the screen', making the viewer feel as if they are part of the film. Similarly, surround sound can serve to make a spectator feel submerged within what is happening on screen.

Miriam Ross (2015:111) makes a connection between the deep-focus of 3D filming and the sublime because such shots provide additional sense of depth "often at an embodied and guttural level when combined with motion into the scene or vertigo-inducing displays of height". Therefore, special effects may result in a sense of immersion by taking the viewer on a 'journey'. Pence (2004:32) references Walter Benjamin in arguing that "[c]inema's seductive presentation of the real, then, seems profoundly unreal: 'the sight of immediate reality has become the [unattainable] blue flower in the land of technology'". In 3D cinema, the representation of the real/material world becomes hyperreal or more real than real, that is, it becomes hard to distinguish between reality and the simulation thereof.

Special effects point to themselves. They want to be noticed. They want the audience to be amazed, to ask: 'How did they do this?' Other effects – the ones that are not considered 'special' like ordinary sound or shots – are not noticed. As Kuhn (1990:149-150) states, SF emanating from Hollywood is self-referential because of how it draws attention to the use of special effects, thereby

> inviting admiration for the wizardry of the boffins and the marvels of a technology that translates their efforts onto the screen. They call forth wonder at the fictional machines of space travel, and also at the 'machine' of the cinematic apparatus itself. In fact, there is never any pretence that special effects spectacles are anything other than artefacts; and yet at the same time… the illusionism of classical cinema works to persuade us otherwise. In this sense, the visual pleasures proposed by special effects are twofold, and incorporate contradictory beliefs held simultaneously: 'I know, but…'

Thus, special effects help to create the sense of wonder necessary for the sublime experience, both by giving visual expression to the tropes/visual icons of science fiction necessary for the plot, such as a spaceship or an alien or cyberspace, as well as the marvel at the technical aspect of the effect itself, whether it is an ultra-realistic 3D rendering of an unknown planet or an explosion presented in surround sound that makes a viewer feel as if they are 'inside' the story.

Special effects, however, cannot be too obscure otherwise they may not be understood or decoded. Johnston (2011:16) states that the "special effects in science fiction films again tread the line between realism and fantasy, wanting to create amazing vistas but often attempting to make them appear possible". The unlimited sky, boundless space, infinity – the things of

the mathematical sublime – are confounding and therefore interpreted as being unrepresentable. However, art, like science fiction, will *attempt* to represent these ideas, to make them "appear possible". And as stated in Chapter Four, science fiction cannot only show the viewer strange and wondrous images that are unfamiliar. These images must be placed in a context that is comparable to the familiar. Without this the audience does not necessarily know when to respond with the 'wow' that comes with showing the strange and never-seen-before.

Consequently, SF must eventually present something known to the viewer in an extrapolated context by placing it near an object or setting that is familiar, otherwise, the film cannot be 'read', that is, no meaning can be derived from it. Similarly, and inevitably, the sublime, however ineffable, must signify something – whether in words or images in art and film – in order for someone to derive meaning from it. The sublime exists in the very inexpressibility of lived experience of emotion, of ontology or being embodied. Redmond (2016a:38) states that in sublime moments "the limits of the embodied self are breached, and the material conditions of one's existence liquefy". Liquefication is the obliteration of structure, changing something from one state (solid) into another (liquid). Special effects in science fiction film cause a change in the self in which the viewer may at first appear to move from one state to another: From immanence to transcendence. However, this is a vacillation rather than a jump of the subject from one binary opposite to another, with no movement happening in between or where there is no bridging of the gap between the two states. As argued in Chapter Three, the changing of the self may happen in cinema which both grounds the body in the 'here' and 'now', even as the viewer has the capacity for transcendence to the 'there'. This relates to Sobchack's (2008:195, emphasis in original) argument that certain *ek-static* moments "are presented not only *to* but *on* the viewer's lived body, where both immanence and transcendence emerge and phenomenologically constitute both the sense and the meaning of religious spiritual experience".

Thus, I propose that it is as if the mimetic exchange discussed in Chapter Three, between the subject/viewer and the object/film, results in an almost simultaneous experience of transcendence and immanence, something that often happens imperceptibly. The viewer may paradoxically feel both embodied and disembodied through various parts of a film. But, without the lived body, transcendence is not possible. Therefore, even when the subject *feels* disembodied by being transported beyond the present and 'into' the world of the film, there is no physical disconnect. Unlike Kant's proposal on the transcendent sublime, the SF sublime does not ignore the body or the senses. Instead of proposing that transcendence of the material occurs through Reason, transcendence in immanence suggests embodiment is

necessary to experience the science fiction sublime in the cinema, that is, the SF sublime is phenomenologically and ontologically constituted through lived experience.

Special effects may give rise to feelings of embodiment through proprioception, that is, by making the viewer conscious of being in or occupying his/her body through a visceral experience. At the same time, mesmerising 3D sequences and surround sound may result in drawing the viewer 'into' the screen or enveloping the viewer in the action. The visceral nature of the SF sublime is a reminder to the subject that they are corporeal. But, there is still the capacity for *ek-static* moments, for being dumb-struck. As Redmond (2016a:33, emphasis added) states, "when the viewer is caught in sublime contemplation there is *embodied* transgression and *transcendence*… where the viewer exists purely as a carnal being, or is newly if momentarily constituted as post-human, in the impossible present or possible future world that has been spectacularly imagined for them". This relates to the bodily immanence and transcendence in immanence that Sobchack (2008:197) refers to.

At the same time, the SF sublime can also suspend corporeality, resulting in what may be experienced as transcendence. Again, this relates to Sobchack's (2008:197) description of the paradoxical feedback loop that can ground the viewer in the present (immanence) even as it transports the viewer elsewhere with a sense of being outside of or beyond the present (transcendence). Furthermore, Sobchack (1987:100, emphasis added) states that SF gives the viewer images – even though they are artificial – of the overwhelmingly large and of the infinite and that these images are able to suspend the material conditions of the self:

> Extrapolating from known and accepted science, these film images derive their power to induce wonder in the viewer, not through the imaginativeness of their content, but from the imaginativeness of their stance and their scope. *We don't marvel that there are such things as planets; we marvel at the fact that we can see them in a way which transcends our own human size.* Those images which awe us, stun us, do so not merely because they seem meticulously authentic but because *they alienate us from our corporeal selves*, from human notions of time and space.

Again, the sublime, particularly in cinema, concerns gaps within which a push-pull, chiasmic oscillation or tension between binary opposites occur. Bukatman (2003:121) states that cinema "always combines the material and the immaterial, the solid and the phantasmic, the permanent and the ephemeral, the rational and the uncanny". Space, for, example, can refer to a non-space or void in cyberspace where the boundary between material and immaterial breaks down, as well as to outer space where the rationality of astrophysics and quantum physics are challenged by the eerie emptiness and infinity.

Therefore, the SF sublime as put forward here, channelled through special effects, concern both immanence and transcendence. The element of the divine that is at the centre of both immanence and transcendence is present in science fiction. Mircea Eliade (1987:118-119) argues,

> Simple contemplation of the celestial vault already provokes a religious experience. The sky shows itself to be infinite, transcendent… Transcendence is revealed by simple awareness of infinite height. 'Most high' spontaneously becomes an attribute of divinity… The 'most high' is a dimension inaccessible to man as man; it belongs to superhuman forces and beings.

Cinema, however, gives 'man' – the spectator – access to this divinity, or at least, it feels like it does through evoking the sublime. Eliade's argument specifically is an echo of the mathematical sublime, that which is great beyond all comparison.

The manner in which science fiction is presented to the viewer is key in evoking the SF sublime. Sontag insists that science fiction films must be on a wide-screen and in technicolour. In a contemporary setting, this can be adapted to a wide-screen, preferably in IMAX, in 3D and with surround sound in order to achieve a sense of rapture. In addition, the film must be watched in the dark of a cinema, in a way that 'blocks out' the real world and helps immerse the viewer. Sontag (1965:44) equates SF mostly with disaster films and as being preoccupied with death: "In the films it is by means of images and sounds, not words that have to be translated by the imagination, that one can participate in the fantasy of living through one's own death and more, the death of cities, the destruction of humanity itself". The viewer may, therefore, experience a kind of catharsis, getting rid of the terror inspired by death through watching the science fiction film, in an experience of the dynamical sublime through which Reason trumps terror.

Special effects are necessary to evoke the feeling of the sublime in the viewer through transcendent simultaneity, that is transcendence in immanence, through both an awareness of the response of the body to these effects, as well as the affect of these effects. The affect referred to here, relates to Deleuze's (cited in Clare Hemmings 2005:552) proposal that affect is "bodily meaning that pierces social interpretation, confounding its logic, and scrambling its expectations" and "as describing the passage from one state to another". The passage does not need to be perceptible or clearly delineated. This passing between two states (what was termed liquefying earlier) is more akin to the feedback loop happening in the cinema than a permanent change. This may be applied to the experience of the science fiction sublime, which comprises elements of other iterations of the sublime: From the state of terror to the state where Reason prevails; from a state of wonder and incomprehension to a state where the mind is able to acknowledge its inability to describe or represent the incomprehensible or

ineffable; or in the reciprocity that occurs between immanence and transcendence to become transcendence in immanence.

In science fiction, the "moments of sublime contemplation create the conditions where viewers *feel* as if they had an outer-body experience; one that has been cut free from the borders of the linguistic-led self of everyday existence" (Redmond 2016a:35, emphasis in original). But of course, the viewers are not actually cut free; they are still tethered to their bodies. The transcendence in immanence of the SF sublime creates a sense or feeling in the viewer that they are relocated, transposed or shifted beyond the constraints of the flesh/meat that is the body into the virtual world of the cinema screen i.e. 'there' and 'then', and at the same time reminds the viewer of an ontological bodily presence that locates them 'here' and 'now'. Sobchack (2008:197, emphasis in original) describes this process as "a mediating structure… [that] simultaneously *intensifies* and *diffuses* both our senses and our sensual location".

The viewer of a science fiction film may ultimately ask him or herself whether something is real, and with marvellous special effects, there may be a double-take or hesitation, as the viewer tries to contextualise the images or even the narrative against their prior knowledge, something that is presented in novums[70] such as travelling through space and time in a machine created by advanced CGI. Jay Telotte (2004:63) states that in the "moment of hesitation, we should be able to discern the problem of representation, which lies at the [science fiction] genre's very core, for we hesitate because of an immediate challenge to our usual system of referents, the stock of images which lived experience normally affords". This problematic representation is an example of the challenge experienced in the relationship between subject and object, signifier and signified in the sublime discussed in Chapter Three.

Bukatman (1990:207) further explores the challenge in the subject-object relationship in his description of the film *Videodrome* (David Cronenberg 1983), arguing that "body and image become one: a dissolution of real and representation, certainly, but also of the boundaries between internal and external, as the interiorised hallucination becomes the public spectacle…". This dissolution of boundaries is aided by viewing a film in a cinema. The popularisation of watching films, particularly science fiction films, in 3D IMAX, is important in shortening or trying to erase the distance between the screen and the spectator. Ross (2015:1-2) states that "stereoscopic images[71] disturb the traditional concept of disembodied vision.

[70] A novum is a term coined by science fiction scholar Darko Suvin to describe something new and strange in a plot that is scientifically possible, and, could refer to an object or an event (Damien Broderick 2015:[sp]).
[71] The stereoscope is a device, first showcased in 1838 by Sir Charles Wheatstone, that combines two different images into one image that is "depth-rich" or almost three-dimensional (Ross 2015:2). 3D film uses the same concept.

They present optical illusions in which objects are frequently close but simultaneously not quite there, forcing into play an embodied engagement with a thick, tactile visual field". Images may appear so close they could be 'touched'; the action looks like it comes out of the screen and 'at' the viewer. Ross (2015:2) states that "the body [of the viewer] is positioned in a sensory arena that is material and immaterial at the same time". Therefore, stereoscopic imagery helps obscure the boundary between the subject (viewer) and object (film/screen) and blurs the fourth wall. This informs the proprioception necessary to the science fiction film sublime.

Furthermore, following the discussion of the cinematic sublime in Chapter Three, it can be argued the experience of the science fiction sublime is most likely to occur in the cinema. Stereoscopic imagery, in what Ross (2015:21) refers to as the "hyper-haptic 3D field screen", is what can take the audience 'into' the screen 'out of' their bodies. Ross (2015:23-24) states that this kind of screen produces

> an overwhelming statement in which the audience is brought towards the screen space and taken through infinite depth planes. At times, use of negative parallax space suggests to the viewer that objects exist between them and the traditional plane of the screen. At other times, their eyes are drawn into positive parallax space that suggests objects and settings recede forever away from them.

Intermittently, the spectator may feel overwhelmed by these hyperreal and haptic images, further enhancing the experience of the science fiction sublime. And, the sensory of overload of the 3D SF film in the cinema, echoes the sensory overload of virtual reality. The experience of the SF sublime in this context results in what Pence (2004:54) calls being "arrested in a Derridean quandary: what we see cannot be true, while equally it must".

What is crucial to any SF that wishes to evoke the feeling of the sublime in the viewer, is that it appears 'believable' in some sense, i.e. it needs to have credibility. Sobchack (1987:88) states that while in science fiction "we are invited to wonder at what we see, the films strive primarily for our belief, not our suspension of disbelief – and this is what distinguishes them from fantasy films…". This striving for the viewer's belief results in a kind of dialectical tension between what the viewer usually experiences in the cinema i.e. the suspension of disbelief and the fight to have the viewer believe the plot in science fiction. At least a small part of the spectator must believe in the *possibility* of what is shown, otherwise the film might not evoke any kind of terror or awe, which is imperative to the experience of the science fiction sublime. As Sobchack (1987:88) further states,

> To make us believe the possibility, if not probability, of the alien things we see, the visual surfaces of the films are inextricably linked to and dependent upon the familiar; from the wondrous and strange and imagined, the cameras fall back on images either so familiar they are often downright dull, or neutralize the alien by treating it so reductively that it becomes ordinary and comprehensible.

Therefore, again, while science fiction film might present images that are near-incomprehensible because they have never been seen before – whether it is the boundlessness of space or an unknown creature – many films rely on the camera presenting something that is familiar, whether it is a familiar landscape (like Mars which might look like a desert), or familiar objects or icons like cutlery or clothing.

The SF sublime, like other iterations of the sublime, is riddled with anomalies – characteristics that appear inconsistent or contradictory. The mind and body, both contract and are amplified or 'expanded' in the SF sublime. Csiseray-Ronay (2008:146-147) states: "The sublime is a response to a shock of imaginative expansion, a complex recoil and recuperation of self-consciousness coping with phenomena suddenly perceived to be too great to be comprehended… With the sublime, consciousness tries to expand inward to encompass in the imagination the limits to its outward expansion of apprehension". The end of space (which does not exist) is the limit of human imagination and human knowledge. Infinity cannot be comprehended and yet, according to Kant the mind will try to do so. There is a mediation, a negotiation between what is impossible and what is possible. Pence (2004:35) states that "film mediates between technique and magic, between science and religion". It is imperative to note that in the science fiction sublime, what happens to the body is as important as what happens to the mind. What happens here and now is as necessary as the then and out there.

Furthermore, the visual and the haptic reinforce what is happening on the screen in terms of the *mise-en-scène* and the plot, along with the themes explored in the story. Alienation and the alien Other, the simultaneous flatness of the computer screen combined with the infinity of cyberspace, the eternal boundlessness of outer space, and the mind-bending paradoxes of time travel, these are all enforced by stereoscopy. The hyper-haptic 3D field screen acts on the body; the images may enact a physiological response, a confirmation of embodiment. But even so, the awareness brought to the body may result in a sense of the body being objectified, being made subject to the spectacle on screen. Sobchack (1987:292) likens this to an alienation of the body.

Through the alienation of the body, there is a sense of the beginning of the negation of the self or moving beyond the self. The SF sublime presents the subject with something larger than him/herself, something so incomprehensible it is overwhelming. In the face of being overwhelmed it becomes near-impossible to make sense of anything, including the sense of self. At the same time, the mind will in the Kantian sense, take over, and nevertheless try to make sense of the phenomenology of the aesthetic experience. Patricia Yaeger (cited in

Bukatman 1995:286, emphasis in original) argues for a way in which the sublime can encourage a new relationship between self and other:

> the sublime preserves a sense of the Other, or 'alienness,' even in the face of cognitive assimilation [the process that happens when watching a film, for example], and it can encompass the intimate as well as the grandiose. The Other need not be 'obliterated or repressed', but can be preserved in a newly dialectical Self-Other relation… [O]ne can locate a desire to *merge* with the Other in the sublime moment…

The science fiction film sublime is where this new dialectical self-other relationship may occur, not only as related to special effects, but also thematically.

5.2 Representing the science fiction sublime: Thematic concerns

As stated earlier, not only is the SF sublime inscribed in SF film through special effects, which evoke the feeling of the sublime but it is also represented in the plot and the themes. As was argued in Chapter Three, the sublime may be seen as an idea that is ineffable, hence SF stories or plots may not be sublime in and of themselves but rather representations or depictions thereof. This section focuses on three typical themes and how various versions or renditions of the sublime are represented.

5.2.1 Alienation and the alien other

Alienation as a theme is often present in science fiction film in terms of the alien other, something that is not necessarily about the creature itself but about what it represents regarding the relationship between the self and the other. Carl D Malmgren (1993:17) identifies two kinds of alien encounters which underlie this relationship: Whether aliens are "anthropocentric" (in which the alien serves as a 'mirror' to human problems, forging an us-them connection) or "unknowable". The latter is more important when it comes to discussing alienation. The unknowable aliens "explore the limitations of being human and suggest the possibility of transcending those limits. They examine what we are not… they encode a degree of excess, an 'essential strangeness,' that cannot finally be mastered" (Malmgren 1993:17). The unknowable relates to the SF sublime in the way that the subject is unable to express that which is 'greater than' or that which is indescribable, in this case, the alien which points to the extreme limits of human understanding.

There are three ways of treating alien alterity or difference: "Other-as-Enemy", "Other-as-Self", as well as "Other as Other" (Malmgren 1993:25&26). The first perspective allows humans to conquer aliens, to kill and destroy, through creating an us-them attitude. This is illustrated in

films like the *Alien* franchise, *Independence Day* and *War of the Worlds*. The second way allows for communication and for the human self to identify with the alien other, for example in *E.T., The Man Who Fell to Earth* (Nicolas Roeg 1976) and *Arrival*. In this second approach, the aliens at first appear unknowable but eventually, humans find a way to connect and identify with them. The third way focuses on the humans' responses to aliens, in particular, the aliens' unknowability and how humans are limited in their understanding. As Malmgren (1993:29) states, "the alien alien [other as other] is necessarily characterised by an excess, a surplus of signification, an inadequation between signifier and signified. Such excess is, by definition, 'beyond words'; all attempts at description, at direct rendering, inevitably violate the alien's irreducible strangeness". The gap between the signifier and signified relates to the sublime in the way in which it represents the unknowable and unspeakable, as is argued in Chapter Three. But as is stated in that chapter, the gap is not necessarily completely insurmountable because the medium and genre of science fiction film attempt to bridge that gap by taking the viewer or subject outside of themselves in a feeling of a transcendent experience.[72] Examples of the impossibility of expressing the alien as alien and of the focus on the limits of human understanding are present in films like *Solaris* (Andrei Tarkovsky 1972) and *Under the Skin*. Andy Sawyer (2015:90, emphasis in original) states: "The science fiction writer (and reader) is *attracted* by Otherness, *seduced* by strangeness". Otherness is fascinating, entrancing and often induces the scopophilic pleasure described in the previous chapter. The "alien alien" (or "Other as Other") is indicative of that which is beyond description, and calls for the subject or viewer, to open themselves up to that which lies outside of themselves. That which lies beyond the subject, beyond the self, becomes a sublime transcendent experience, which forms part of the SF sublime. Richard White (1997:128-129) states that through

> the sublime, the individual is literally opened up to that which lies outside of herself. She does not experience herself as a 'subject' who projects her interests, concerns and categories onto the world, but, paradoxically enough, as an 'object' in so far as she is addressed and even invaded by that which lies beyond the circle of her own concern. For this reason, I have suggested that the experience of the sublime enables us to have an experience of 'otherness'…

Thus, in science fiction film, the viewer has a sublime encounter with otherness, an encounter that is ineffable and unspeakable (often made manifest in the use of certain special effects to represent ideas like infinity). This is potentially an experience of *ek-stasis*, of rapture, of being taken beyond the self, in other words, transcendence.

[72] Not all science fiction films will have this kind of impact. Redmond (2016a:35) differentiates between the 'thrilling', commodified experience caused by the spectacle in blockbuster films like *Godzilla*, which he argues will not evoke the sublime, and a spectacle that causes "an experience of sublime contemplation where viewers are (haptically) lost in the wondrous images liquefying before them", such as in the film, *Sunshine* (Danny Boyle 2007).

Furthermore, being taken beyond the self results in that self becoming something other or alien, i.e. there is a sense of 'foreignness' to the self. Chidester (2012:102) states that in the sublime moment, the subject "experiences themselves as distinct individuals while becoming lost in an immersion in the divine", which he further describes as the unification of material and symbolic, that is, "transcendent simultaneity". Chidester uses the way sport is presented in the media to illustrate transcendent simultaneity, but it could also be used to describe the way science fiction film as mediation works in marrying the special effects and icons, plots and themes with a sublime experience for the subject/viewer. There is an assimilation of both "a sense of self and a feeling of Other… [in which] the process of mediation effectively produces the true feeling of the sublime" (Chidester 2012:102). Hence, in the SF sublime there is a paradox of simultaneity: The sense of both self and other, both immanence and transcendence, both materiality and immateriality.

As discussed earlier, the science fiction sublime is about immanent transcendence (Morley 2010a:[sp]) or transcendence in immanence (Sobchack 2008:197). To reiterate, Morley (2010a:[sp]) refers to a striving to "re-envisage the self as existing in the light of some unnameable revelation arising in a gap that exists between, on the one hand, a socially-constructed and alienating reality, and on the other, unmediated awareness of life". Fear and terror make one aware of mortality; they create an awareness of life and similarly, the fear represented by the unknowable future, as explored in science fiction film, also creates this awareness of being alive. There is a kind of catharsis that occurs when, faced with the terrifying precipice or abyss referred to by Ouspensky (in Taylor 1992:79-80) in Chapter Three, the subject (or viewer) is able to transcend the fear and turn it into pleasure. Jessica Butler (2012:10) states the "abyss of unpresentability threatens the mind with subsumation and shows it death… The propulsion towards the sublime hazard of death is both thanatic and life-affirming: in peril of death we feel most alive". While the sublime does not concern something which actually threatens the life of the subject, the idea of danger or the potentiality of something life-threatening may exist in the mind of the subject, perhaps even unconsciously. The idea of death, even though death itself may be far off, results in an awareness of life and awareness of self, and even a feeling that the self is being transcended as argued by Morley in Chapter Three. Du Preez (2009:205) states that the sublime moves towards direct encounters with terror in extreme sport, but this may also be applied to how the viewer is moved towards the screen during a 3D film in a cinema, so that the "[t]error is no longer kept at bay but now overwhelms, overtakes and almost drowns the subject, whether experienced in reality or mediated on screen". This brings about a keen awareness of life because it is posited against the possibility of death displayed on screen during an immersive experience.

Returning to the gap Morley refers to, the alien other represents the liminal space between what is knowable within the self and the unknowable other. If in special effects the sublime is located in the gap between the screen and the viewer, it can also be argued that the sublime is represented in SF by the gap that exists between self/subject/viewer and the alien other,[73] that alienates the self and that may cause a sense of dislocation from the here and now. The feeling of alienation even has elements of the uncanny sublime (which forms part of the representation of the SF sublime), in which the self recognises some familiarities in the alien other (like a face with eyes), but at the same time experiences a feeling of estrangement from it, what Freud (1919:244) calls "the distinction between imagination and reality".

5.2.2 Technophobia and technophilia

One of the most prominent themes in science fiction film is humans' attitude towards technology, which is either one of fear/pessimism (technophobia) or one of optimism (technophilia). Michael Ryan and Douglas Kellner (1990:58) state that conservatives view technology as representing "artifice as opposed to nature, the mechanical as opposed to the spontaneous, the regulated as opposed to the free, an equaliser as opposed to a promoter of individual distinction, equality triumphant as opposed to liberty, democratic levelling as opposed to hierarchy derived from individual superiority". Technology for some, threatens the social order of family, free choice and the idea of humans as the most important beings in the universe. Technophobia and technophilia can alternatively be described by what Rob Wilson (1994:210) calls "techno-angst" and "technoeuphoria" respectively, the former of which operates on fear and paranoia, and the latter on awe. However, many science fiction films are both technophobic and technophilic, highlighting that it may be humans' application of technology that will either result in destruction or progress. For example, in the film *Blade Runner* the protagonist Deckard remarks: "Replicants are like any other machine. They can be a benefit or a hazard".

Therefore, there is an inherent ambiguity in technology. This duality is arguably best expressed or represented when human and machine are combined, either through the human becoming one with a machine interface, virtually, such as in cybernetics, or through the physical combination resulting in a cyborg that is both fearsome and awesome. Both combinations concern the loss of the body and the loss of autonomy, resulting in something posthuman. This relates to Bukatman's (1993:244) description of a new kind of flesh: "Terminal flesh", which is often seen in cyberpunk like William Gibson's "Sprawl" trilogy or in

[73] The theme of alienation is discussed further in the analysis of the film *Under the Skin*.

films like *Blade Runner*, *Johnny Mnemonic* (Robert Longo 1995), *The Matrix* and *Ghost in the Shell*. The posthuman[74] referred to here is as a result of modifying the flesh using technology, often to try and leave behind the constraints of the body.

There are two ways in which to interpret posthumanity in SF film: The first is an attempt to negate the body, while the other is trying to fuse the body with a machine. In the former, posthumanity attempts to dissolve the body, what Gilles Deleuze and Félix Guattari (2005:158) describe as "the Body without Organs" or BwO; however, BwO does not necessarily refer to the absence of organs but against "that organisation called organism the organic organisation of the organs". In other words, it refers to being against what Bukatman (1991:353) calls a "heterogeneous system". At the same time, it may also refer to a subject's relationship to their physical body in terms of how cybernetics or the cyborg relates to disembodiment. Deleuze and Guattari (2000:20) state that the

> points of disjunction on the Body without Organs form circles that converge on the desiring-machines; then the subject – produced as a residuum alongside the machine, as an appendix, or as a spare part adjacent to the machine – passes through all the degrees of the circle, and passes from one circle to another. This subject itself is not at the centre, which is occupied by the machine, but on the periphery, with no fixed identity, forever decentred by the states through which it passes.

According to Bukatman (1991:354), Deleuze and Guattari are presenting both "a disembodied subject and a trajectory through a space that is defined and anchored by a machine" with the body constructed in the language of "techno-surrealism": Both biologically (as an appendix) and mechanically (as a spare part). Furthermore, Bukatman (1991:354) states that BwO is "the state where we desire to dissolve the body and regain the world". Leaving the constraints of the body, the flesh behind to achieve a type of 'freedom' offered by the virtual and the machine is a temptation explored in films like *Transcendence* (Wally Pfister 2014) in which the protagonist, a scientist, uploads his consciousness to an artificial intelligence, with dire consequences. The films *Tron* and *Tron: Legacy* have a similar approach, which sees the protagonists being 'downloaded' into a computer mainframe where they encounter dangerous enemies they have to fight in a virtual/digital world.

The idea of a mind/consciousness being 'plugged in' or uploaded/downloaded into a virtual reality or cyberspace is what Bukatman (1993:9, emphasis added) calls "terminal identity" – "an unmistakably doubled articulation in which we find both *the end of the subject* and a new

[74] According to *The Encyclopedia for Science Fiction* (David Langford 2017:[sp]), "[s]ince the 1980s the most popular route to posthumanity has been to free oneself from the limitations of flesh (the parallel with the tenets of many religions is sufficiently obvious) by upload into an electronic existence where humans can, at last, meet their AIs on more or less equal terms and even, after a fashion, interbreed".

subjectivity constructed at the computer station or television screen". However, it is still not possible to completely dissolve the body and instead, what happens with terminal identity is only the start of a breakdown of the boundary between the body and subject, and the object, creating a gap.

The relationship between the subject (human) and object (machine) is of pivotal importance in the discussion of the sublime. As argued in Chapter Three, it is in the gap between the subject or viewer of an artwork and the artwork itself that the sublime lies. Similarly, as previously argued, an object (of technology) is also not the location of the sublime but rather evokes or represents the sublime. In order to understand how this happens, the relationship between subject and object must be examined. One way in which to view this relationship or in which to label the gap is as a liminal space, which Edrie Sobstyl (2000:[sp]) describes as something "between virtual and material realities, between the human and the technological, between the mind and body, men and women, past, present and future". The idea of an in-between or a gap again recalls the earlier discussion of Morley. Furthermore, it relates to the discussion around the argument made by Žižek (1989:229), also explored in Chapter Three, of the sublime being in the "gap separating phenomenal, empirical objects of experience from the Thing-in-itself".

The second way in which to view the relationship between subject/self and object/machine is by a blurring of the liminal space or gap. N Katherine Hayles (1999:3) states that in "the posthuman there are no essential differences or absolute demarcations between bodily existence and computer simulation, cybernetic mechanism and biological organism, robot teleology and human goals". However, even though in the cyborg the line between machine and flesh does appear almost seamless, in virtual reality, for example, while the subject/game-player/viewer may *feel* fully immersed through proprioception the game or film is ultimately, still, fiction, and at some point, the subject must return to 'reality'. Virtual reality and cyberspace work on feedback loops that create illusions of reality – they are the simulacra that are described specifically by Baudrillard's (1988:[sp]) third order of simulacra: "simulation simulacra: based on information, the model, cybernetic play. Their aim is maximum operationality, hyperreality, total control". The fear of ceding "total control" of the body or of the humanistic belief that views humans as the ultimate apex predator, is something that occurs repeatedly in science fiction film and is an expression of the technological sublime, one of the elements of the SF sublime.

However, as Bukatman (1993:8) writes, it is not technology by itself that science fiction is concerned with but rather "the interface of technology with the human subject". The question

raised is: What does technology do *to* humans rather than just *for* humans? Bukatman (1993:10, emphasis added) argues that "[s]cience fiction narrates the *dissolution* of the very ontological structures that we take for granted".[75] Special effects enhance and support these experiences. Bukatman (1993:14) states that the computer-generated imagery of cyberspace in a film like *Tron* and the liquid metal marvel of the Terminator android in *Terminator 2* "presents the previously inconceivable in detailed, phenomenologically convincing forms… [in which] the invisible workings of electronic technology are made manifest… [and] the ontological anxieties of the present are endowed with a concreteness and literalness of form…; a re-embodying of the human subject…". The theme of technophobia/technophilia in SF film is often a representation of both the embodiment and disembodiment of a character. At the same time, this is also reflected in the feedback loop that happens between the screen and the viewer in the cinema, which results in an anomalous, almost imperceptible transition from the constraints of groundedness (here) to 'beyond' the body and the screen (there) and back again to presence, hence transcendence in immanence.[76]

Furthermore, while SF can try to relieve the anxiety around fear of loss of the body, the special effects, can also inform or stoke that anxiety. Fears around the cyborg, for example, concern a loss of bodily autonomy. Bukatman (1993:78, emphasis added) refers to an "invasion of the body, the loss of control, *the transformation of self into Other*". It is important to note how the theme of technophilia/technophobia, like the theme of the alien/alienation, also concerns the relationship between the self and the other. The Cartesian mind-body split becomes a three-way split of "mind/body/machine" (Bukatman 1993:82). Technophobia relates to the idea that humans in their physical form are becoming obsolete, something that no longer matters, something that is almost primitive and not needed.[77] Terminal identity, cyberspace and virtual reality may be seen as disembodied spaces where the 'prison' of flesh is no longer required. Bukatman (1993:106) states that "the bodily experience of the human is absented from the new reality" of the virtual. The abandonment of or at least the start of the disappearance of the body in the "new reality" is something that may merely be *represented* in the plot, as a theme in SF. Leaving that body behind is as yet, not completely possible. For example, the

[75] These ontological structures may be also be expressed phenomenologically in the cinema, particularly as related to the body and to the subject's direct, conscious experience of being inside their body (as through proprioception during virtual reality and in 3D science fiction films), that is, immanence. At the same time, there is a paradoxical process that takes place, which tries to release the viewer from sensual embodiment and "ontic constraints and demands" in order to achieve transcendence (Sobchack 2008:197) i.e. transcendence in immanence.

[76] This is not to say it happens in all SF or even all effects-heavy SF but rather that it may happen in some SF, depending on how 'good' the effects are and how engaging the story is to the viewer.

[77] However, it is important to note this is not always seen as something negative. Haraway, for example, views the dissolution of the body into the cyborg as something positive. Haraway (2000:292) describes the cyborg as "oppositional" and "utopian", something that circumvents Western constructs around gender, race and class. This may be somewhat idealistic, though, and it does appear that humankind may be struggling to achieve this. An example of this struggle is the "Gamergate" saga, in which men attack and threaten women who take part in online and virtual gaming, negating the idea that gender constructs are being circumvented.

cinema (IMAX 3D, surround sound) has become an increasingly virtual experience where a contradictory experience takes place in which transcendence in immanence is foregrounded.

Furthermore, if one takes a feminist perspective that differs from Haraway's positive view of the cyborg, more questions arise about how the cyborg represents (dis)embodiment. According to Zylinska (2001a:128), the description of a cyborg as a hybridisation of machine/technology and human is problematic because it relies on absolute binary distinctions. Instead, it is argued the cyborg should be viewed "as signifying an intrinsic *instability* between what is traditionally perceived as human and machine… [Perhaps] cyborgs could rather be seen as figuring the uncertain and performative character of identity and the way it is channelled into sexualised bodies and genders" (Zylinska 2001a:128, emphasis added). The cyborg is difficult to 'place'; its ontology is ambiguous and its inconclusive nature evokes anxiety and terror, akin to the sublime. Significantly, the boundary is unstable and there is an uncertainty of identity with the oscillation between binary opposites being a key representation of the science fiction sublime.

The theme of technophobia/technophilia also represents the SF sublime through stories of quasi-religious experiences to transcendence. Mosco (2004:13) refers to a December 2002 issue of *Wired* magazine, which contained a number of articles "on computers, science, transcendence, and religion. New media convergence may have failed, but there is a 'new convergence' between technology and religion". Editor-at-large Kevin Kelly (2002:183) announces that "God is the Machine" and concludes that "the universe is not merely like a computer, it is a computer". SF often presents the machine as God, for example, the 'evil' programme in *Tron* and *Tron: Legacy* is god-like: All-powerful and all-knowing, something to fear, revere and worship even while trying to defeat it. Similarly, the machines in *The Matrix* trilogy are presented as ubiquitous and omnipresent.

According to Mosco (2004:24), "[p]aired with the sublime is the process of demonisation, which also encases its object in a transcendent aura, particularly when it is applied to technology". In other words, technology is made fearful or terror-inspiring through demonisation, a process that through the very etymology of the word, is strongly linked to religion and the supernatural. Furthermore, Mosco (2004:24) compares the Romantic poets' rapture before great mountains to a contemporary reverie of cyberspace, albeit an uneasy reverie. Cyberspace/virtual reality is a void, an ongoing and infinite emptiness that invokes fear. As Voller (1993:20) states, cyberspace "relocat[es] infinity, removing it from its exalted place in the heavens or on the terrestrial horizon and squeezing it into the interface between human mind and computer technology". In a technophobic/technophilic world the infinite is

found in a gap or void not unlike the zips of Newman's paintings. The void of cyberspace is a sense of what Morley (2010a:[sp]) calls "being on a borderline or edge where we can no longer codify experience… a fundamental prerequisite for a deeper sense of reality serving to mediate between being and nothingness, and communicating through a condition of absence of a heightened awareness of self". Therefore, there is an exchange between the embodied self (being) and negation of self (absence).

Hence, technophilia/technophobia, in particular as related virtual reality, cyberspace, the cyborg and the machine, concerns a line between human and machine, subject and object, a line that may, however, become blurry and difficult to distinguish. In cyberpunk, in particular, for example, the body becomes something to be scoffed at and there are conscious efforts to blur or even to try and erase the line. In Gibson's *Neuromancer* (1984:6) the body is referred to as "meat", a prison of flesh and something that is depersonalised, dehumanised, a thing that can be consumed or discarded. At the same time, cyborgs and increasingly-humanoid androids give rise to a fear that the machine is becoming more human than human and will supersede the flesh.

Many SF films that explore cyberspace and virtual reality recall Kant's dynamical sublime. Csiseray-Ronay (2008:170) refers to this as the "technodynamic sublime", which "responds to technology that inspires awe either because of its overt power or because of humanity's massive and critical dependence on it"; thus, no longer is the dynamical sublime inspired by a force of nature like a fearful storm, but in "second nature's potent machines and systems". In *The Matrix*, for example, the protagonist, Neo, is informed that the world he has always believed is real is, in fact, false, a creation of the artificial intelligences that have gripped humanity in a subliminal and unconscious illusion. However, Neo is given a choice: To continue as he has, living in the 'virtual', fictional world, or to see what is actually happening and to fight the evil AIs. The difference between the virtual/fake and the real in the film recalls the SF sublime as those who fight the AIs are able to plug themselves into the virtual world of the machines in order to fight them, with the characters moving from being embodied to disembodied and back again. The line is a blurred one, because dying in the virtual world, means dying in the real world. As the father-figure character in the film, Morpheus, explains to Neo: The mind and body cannot (yet) exist without each other. In addition, the spectator, through the special effects in the film, oscillates between the feeling of being present in their bodies and the sense of being elsewhere, in the story, almost as if inside the screen.[78]

[78] Technophilia/technophobia is discussed further in this chapter's analysis of the film, *Tron: Legacy*.

Furthermore, technophilia also concerns the digital, cinematic and technological sublime, which are all related to one another through their close relationship to science, whether through physics, cyberspace or objects of technology. Transcendence in these forms of the sublime is often not simple to evoke or represent because new technologies replace old ones at an incredible pace, and as the new and novel replace the obsolete the latter becomes banal and may lose its ability to evoke the sublime or represent it. Therefore, older science fiction films, whose narratives tell stories with themes that are related to the sublime, may not have an impact that evokes the feeling of the sublime within the viewer, partly because their predictions of the future have proven to be incorrect, or simply because the special effects are so old they no longer invoke feelings of awe and wonder. This could be solved, however, by the idea of ostranenie, discussed earlier. Films' depiction of things that cannot be seen in real life, like cyberspace, make strange familiar concepts (like data conceived in terms of buildings or grids) in order to represent the formless and the things that cannot be seen.

5.2.3 Infinity along the space-time continuum

Space travel and time travel are two staples in science fiction film and thematically they are linked with many plots often involving both. Redmond (2004:114) states that time travel has "an ideological function" that allows ordinary people who feel overwhelmed and alienated in the contemporary world to think they are important in shaping the future: "If the modern world is dislocated, chaotic and disenfranchises… then time travel allows the individual to (finally) bring order to the chaos of the cosmos… When one time travels, one is searching for wholeness, for metaphysical answers to the confusion at the core of the self and to the terrifying plight of the human condition". Time travel in science fiction film, however, is less about a straight line or teleological concept, than about a feedback loop. For example, if someone goes back in time and makes a change, it may alter the future but it could also possibly erase that person's existence, or it does not create the conditions necessary to put the person in a position to go back in time, thereby negating the change and hence, creating a paradox that cannot be overcome. Mark Rose (quoted in Penley 2004:133) states: "'Much of the fascination of the time loop is related to the fact that it represents the point at which the spatialisation of time breaks down'". It is not possible for humans, or any living things for that matter, to stand outside of time and hence the puzzling and irreconcilable time travel paradox invokes the mathematical sublime by filling the mind with the inability to comprehend or make sense of it, and then, through watching it being represented in film, triumphing over the incomprehension.

Time travel is a primary site for the representation of the SF sublime. Bignell (2004:140) states that:

> What both time travel and cinema can do is to make the familiar appear unfamiliar by changing the manner of its perception. What is rapid can be slowed down, what moves slowly can be speeded up, and forward motion can be reversed. Time travel and cinema seem to show the spectator the workings of the laws of nature, granting him or her a special perception, which makes the ordinary marvellous and strange.

Making the familiar unfamiliar also relates to the uncanny as it gives rise to a feeling of being unsettled. In addition, time travel, like the science fiction sublime, can be confounding and contradictory. For example, consider the paradoxical title of the film *Back to the Future* or the setting of *Star Wars*, which takes place "a long, long time ago" but is set in a time when space travel is the main mode of transportation (something yet to happen). Csiseray-Ronay (2008:98-99) states that time travel narratives

> pose the possibility, not only of imagining how the future will come into being, but of intervening in events that have already happened, in order to change their future, our present. Time ceases – for a moment or forever – to be the absolute, inexorable current of fate, the one-way traffic of human existence toward personal death. It becomes an architecture that can be redesigned, a plasma that can be shaped, or a machine that can be manipulated by human intentions.

Science fiction film forms part of the architecture that can be redesigned to present things that are bewildering, astonishing and difficult to understand.

Travel, specifically space and even time travel, concerns the kind of adventure/explorative journey that can represent the sublime as they are akin to the journeys undertaken during the Industrial Revolution, which relates to the American technological sublime. According to Bukatman (1995:263), travel has "provided the metaphor for a broad evocation of a spatiotemporal continuity wedded to a utopian dedication to 'progress'". The spectacular and awe-inducing, wondrous panoramas of new landscapes and horizons, and symbols of progress (like bridges, electricity and the steam train) have been supplanted by the alien landscape of other planets or celestial bodies, the infinite horizon of space and the spaceship or time machine as symbols of progress. These representations, through special effects, represent the SF sublime (the film as artwork) and may evoke the experience of the SF sublime, depending on the efficacy of the effects.

Furthermore, as described in relation to the themes of the alien other/alienation and technophobia/technophilia, there is a disruption of self (the subject or spectator) present in the theme of space and time travel, a disruption that relates to the SF sublime. Bukatman (1995:266-267, emphasis added) states that,

> the sublime initiates a crisis in the subject by disrupting the customary cognised relationship between subject and external reality. It threatens human thought, habitual signifying systems, and finally, human prowess: the mind is hurried out of itself by a crowd of great and confused images, which affect because they are crowded and confused. The final effect is not a negative experience of anxious confusion, however, because it is almost immediately accompanied by a process of appropriation of, and identification with, the infinite powers of display. *The phenomenal world is transcended as the mind moves to encompass what cannot be contained.*

The incomprehensible, perplexing infinity of space, quantum physics, and the confounding cognitive dissonance that is time travel, suspends and dislocates the relationship between self and "external reality". This inability to comprehend (whether partially or fully) the concepts of science fiction relates to the Kantian sublime in that SF film is the conduit/medium through which the superiority of Reason may prevail. But as previously argued, some SF goes even beyond transcendental Reason, by working to create transcendence in immanence, thereby evoking the science fiction sublime. As stated earlier, this is mostly true[79] for new effects and new films that supplant what has been seen before. Sobchack (2008:197) states that the paradoxical experience of transcendence in immanence "emerges from our sensual embodiment even as it seems to release us from our bodies' ontic constraints and demands".

While Sobchack's argument acknowledges that the sublime in cinema may result in transcendence in immanence, thereby considering both Burke and Kant's renditions, it does not address the gap conceived of by Morley or the liminal space referred to by Sobstyl. What this study proposes is that transcendence in immanence occurs within the liminal space and blurred boundaries, sometimes represented by the distance between the screen and the viewer, and sometimes thematically. The gap is a void, akin to a black hole in space, a nothingness in which a subject may unconsciously move from embodied immanence (caused by proprioception and an awareness of being in the cinema) to disembodied transcendence (a feeling of becoming untethered by being transported beyond the effects) and back to immanence so that an experience of both embodiment *and* disembodiment is created. This is the feedback loop and mimetic exchange that Sobchack (2008:197) refers to, a chiasma that continues for as long the film lasts. The void itself both evokes and represents the SF sublime because of its relation to unboundedness. Andrew M Butler (2003:140) states that "[t]o the extent that there is a void in sf it is in the attempt to present the infinity of the universe, the subjectivity of the alien, the pure arbitrariness that what is the case is indeed the case – that the Reformation has taken place, or that the Allies won the Second World War".

[79] An older film like *2001: A Space Odyssey* is an exception as its effects are still considered awe-inducing, as well as its conceptual representations of space travel and of rebirth.

Space travel and time travel, particularly in older films, often contain elements of Kant's mathematical sublime. Bukatman (1995:267) argues that the "universe without end, it confounds us, but the rhetoric of the sublime paradoxically permits an understanding of these sensory and conceptual limits (the rhetorical threat posed by the sublime is finally, then, not really that much of a threat)". Science fiction film is the way in which the rhetoric or philosophy of the sublime may be evoked, allowing for an understanding of the limits of the senses, the limited ability or even inability for the subject (person) to comprehend concepts like the infinity of space or the paradox of time travel. SF film attempts to represent the unrepresentable. While the sublime is ineffable, as discussed in Chapter Three, art, like SF film, attempts to give it form.[80]

Thus, the science fiction sublime may contain elements of various iterations of the sublime, but in itself concerns transcendence in immanence as evoked by spectacular visual (and sometimes auditory) effects. While transcendence may never be fully realised, as the body is never left behind, I argue the feeling of transcendence, of being taken somewhere beyond the present, is enough to evoke the science fiction sublime. Morley (2010b:18) argues that even though the sublime in contemporary times is experienced in the here and now, it is still an experience that can be transformative.

At the same time, science fiction, particularly film, attempts to represent the sublime thematically. The three themes highlighted in this chapter represent some of the most common narratives in SF. The exposition of these themes and plots lays part of the foundation for the analysis in the next chapter.

[80] The theme of the journey, through space and time, is explored further in the analysis of the film *Interstellar*, in the next chapter.

CHAPTER SIX: THE SF FILM SUBLIME – THREE CASE STUDIES

While various forms or iterations of the sublime may be found in a range of science fiction films, this chapter focuses on how the SF sublime occurs, namely through Sobchack's cinematic sublime (transcendence in immanence). Other versions of the sublime may serve to support these two lenses with which to view the sublime, though a discussion of these versions is limited due to the constraints of the scope of this study.

The films chosen represent an array of approaches that have the same impact, namely an evocation of the sublime through certain effects, as well as a representation of the sublime thematically and through the plot. The first case study, *Under the Skin*, relates to the first theme in the previous chapter, that of alienation and the alien other. The theme is a representation of the sublime while the special effects serve to affect the viewer in order to evoke the feeling of the sublime. While the special effects in *Under the Skin* are minimalist I argue that they are nevertheless compelling in their arousal of the sublime. The second case study, *Tron: Legacy*, illustrates the theme of technophobia/technophobia as discussed in the previous chapter. It uses more of the blockbuster-type of special effects including action sequences and 3D to invoke the sublime. Finally, the last film, *Interstellar*, relates to the discussion of the theme of infinity along the space-time continuum. This film combines uses of minimalism and more spectacular and obvious effects.

6.1 *Under the Skin* and the Alien other

Under the Skin, a 2013 film by director Jonathan Glazer that is loosely based on the Michael Faber novel of the same name, tells the story of an unnamed female alien[81] (Scarlett Johansson) who traverses the streets of Glasgow, picking up men only to devour them later, like a kind of succubus. The film begins with a single white point hovering in the middle of a black screen until suddenly a bright 'spotlight' appears, almost blinding the viewer. Eerie music – brisk movements across string instruments that result in screeching, discordant notes with no discernible melody – accompanies the images.

Circles radiate from the light and for nearly four minutes, the viewer is completely dislocated as it is unclear what they are seeing. Finally, a pupil appears and it is revealed that the viewer has been watching the construction of an eye (Figure 10).[82] At the same time, a female voice

[81] In the script the alien character is named Laura.
[82] The construction of the eye in this film recalls the construction of an eye in the opening scenes of the film *Contact* (Robert Zemeckis 1997). The film also begins with a radiating white light (the sun) before a series of planets,

is sounding consonants and words, an uncanny diegetic experience that is difficult to interpret. While it is possible to understand some words, they are random: There are no sentences, making it impossible to derive meaning from it and the words are like signifiers that stand on their own.[83] The scene depicts the alien being created but uses defamiliarisation to develop a sense of estrangement and the uncanny.

In an interview with Jonathan Romney (2014:[sp], emphasis added) Glazer references the eye as being the window of the soul: "[I]t's a method of looking, a telescope. When the thing comes up the tube and it lights up, you realise that you've been looking at the construction of an iris. But you've also been privy to the fact that there's nothing human whatsoever about it, that it's a masquerade, and that what's inside it is the opposite of us. *It's like maths meeting meat*". The marrying of scientific principles (maths) with the flesh (meat) also recalls the cyborg. Although in this case the cyborg is not a marrying of human and machine, it is the marrying of human and something that could be considered akin to an animal: The alien.

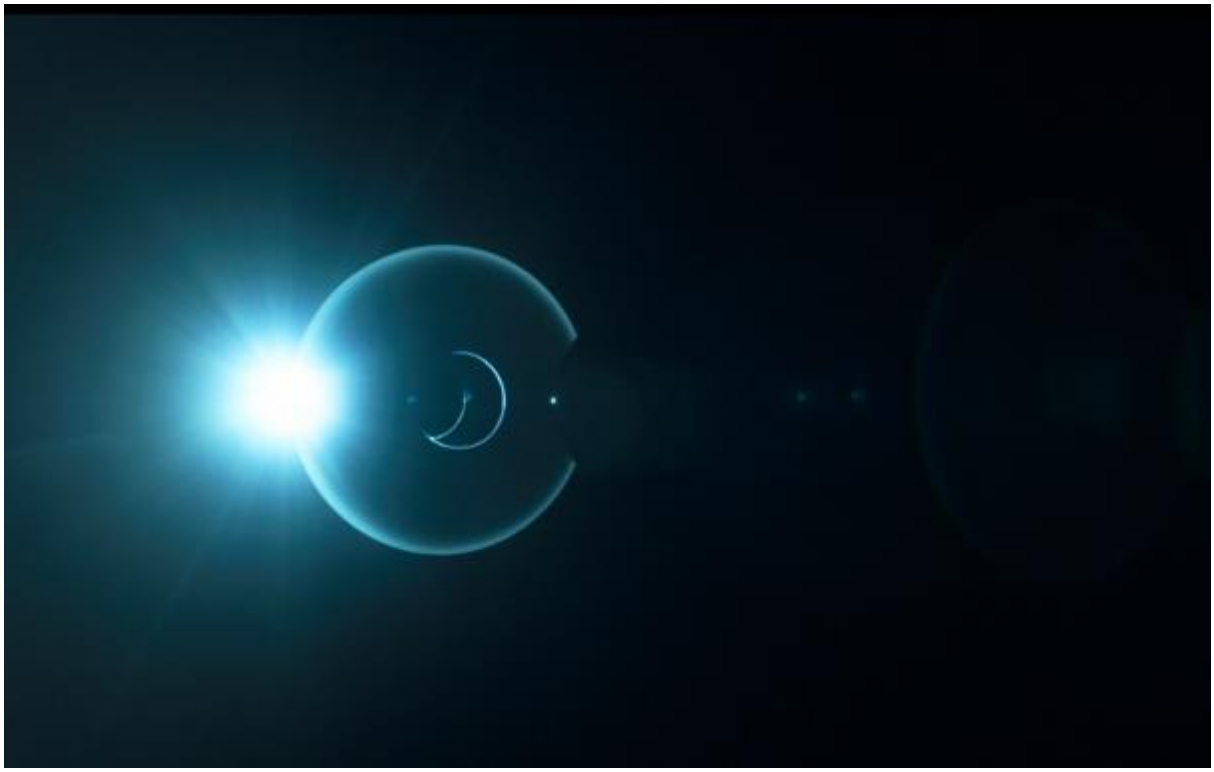

Figure 10: The construction of the eye, *Under the Skin*, 2013.
Screen shot by author.

including Earth, are seen hurtling away from the camera. The universe keeps moving away from the camera before eventually being laid over an eye.

[83] The sounds were recordings of the lead actress training with a language coach to practice a British accent.

Furthermore, the blinding white light, which pierces a field of vision that is mostly black, recalls the void that represents the sublime in films like *2001* and *THX1138*. Watching the film on a big screen, the viewer feels as if they are enveloped in the vastness of the darkness, an absence. Andrew Frost (2011:[sp], emphasis in original) states that absence is "representational negation – the viewer experiences a thing that is both not there and there, an *imminent presence*". While Frost uses the example of a white canvass (recalling Malevich's "White on White" and Newman's later works) as an example of nothingness, a black screen too, evokes absence and emptiness. This blank black evokes the sublime through the terror at the thought of the void. However, the blankness also works as a special effect, moving the viewer from a feeling of embodiment to disembodiment. This movement happens through the untethering of the viewer in which the spectator almost feels as if they are floating in the black, causing a transcendent experience.

Darkness permeates the whole film as only natural light was used to shoot, giving it a feeling of cinema verité. Numerous times it is difficult for the viewer to make out what is happening or to contextualise the images. A motorcyclist, who it later emerges is some kind of 'handler' or 'overseer' for the alien, is seen driving along a wet street at night. He walks along a dark path and fetches the limp body of a woman. Next, in a visual field of stark white, a naked woman, the alien, undresses the dead woman and takes her clothes. The figures are near-black silhouettes floating in the white (Figure 11). Again, the white is like an absence, something in which figures are almost suspended. Just like flat blackness, flat whiteness is a void, what Frost (2011:[sp]) describes as an "existential crisis of an enveloping and a conscious-terminating nothingness…". Again, this nothingness, too, may result in an experience of being beyond the here and now.

Figure 11: Two silhouettes on a ‘blank canvass’, *Under the Skin*, 2013.
Screen shot by author.

The woman/alien takes a white van and so begins her hunt, an inversion of the predatory male hunting for his female victims. She asks men who are walking along roads by themselves for directions. She makes sure to ask whether they live with family and whether they are single to ensure they will not be missed. When first someone takes up her offer of a lift, the viewer is almost left disappointed as nothing happens. Yet, something is inferred, a potentiality and an anticipation of what *could* happen. There is an anxiety, even terror, present in the fact that one does not know what happens next. This recalls an element of Kant’s dynamical sublime in which the subject is removed from danger, but experiences the sublime knowing there is the *potential* for danger.

The film is shot documentary-style, with the majority of the men who are asked for directions being ordinary people who did not know they were being filmed. A number of cameras were hidden in the van including in the dashboard, with not even the actress being told where they were. This offers a sense of gritty realism, which is in stark contrast to the abstractions and special effects. The ‘thisness’ of the here and now in the street scenes is juxtaposed with the ‘thereness’ of the black screen – that is the “elsewhere” or “otherwise” described by Sobchack (2008:197) – in which there is nothing to anchor the viewer, who becomes lost, free-floating, disorientated and terrified. ‘This’ serves to remind the viewer of being in a lived body, which is an experience of immanence, while ‘there’ or ‘elsewhere’ in this film, relates to transcendence, hence there is an almost imperceptible movement from immanence to transcendence and back to immanence, something that occurs throughout the film.

It is only once the alien picks up the second man that the fate of the victims is made known. She lures the man into a flat. The screen goes dark and the man is seen walking into a black void. The floor, which is reflective black glass, is barely perceptible. The screeching leitmotif contributes to a feeling of being unsettled. Both figures begin to undress while the woman walks away, enticing the man. He walks towards her and the solid surface turns into a pool of black liquid. He apparently fails to notice what is happening until he is completely submerged and disappears (Figure 12). The scene is terrifying, horrifying and perplexing. No explanation is given as to exactly what happens to the man once he disappears beneath the black liquid or why it happens.

Glazer (Filmnation Entertainment 2013:10) said the “black room” is about what the “space implied – this alternate dimension. That's the horror of it… I wanted it to be something you would have to intuit. I didn't want it to be literal. I wanted to feel lost in that space. I didn't want to have any barometer, any compass, or to feel like I knew where I was. I wanted to be in an alien space”. The black void of this alien space on a big screen feels like it recedes into the infinitely great of the mathematical sublime. But, more than that, the black room relates to the SF sublime in that it speaks to the feeling that the viewer has been taken out of their body, outside of time (transcendence) through the special effect of the void, but at the same time the viewer has a sensuous experience (immanence) through and on their lived body, with the liquid seeming almost tactile and the man’s nudity being a reminder of the material body.

Figure 12: The liquid black void that consumes the alien's victims, *Under the Skin*. 2013. Screen shot by author.

One of the most terrifying and uncomfortable scenes occurs next when the alien visits the beach. There, her attempt to pick up her next victim, a swimmer, is interrupted when the man witnesses a drowning couple. The swimmer manages to rescue the husband but the woman disappears under the water, an echo of the victims who are submerged in the black liquid. The husband goes back into the water and he too, disappears while the exhausted swimmer lies on the beach. The alien picks up a rock, bashes the swimmer's head in and begins to drag him away. The viewer is shown a crying baby sitting on the beach alone, presumably the child of the drowned couple. The alien is impassive and does not even look at the baby as she leaves it behind. Later that night the motorcyclist goes to remove the swimmer's camping gear, erasing his presence. The child is still crying on the now-freezing beach, and again, is ignored. The piercing wailing is an assault on the senses, an auditory reminder of the present.

The motif of nothingness recurs with the woman's next victim when the viewer is finally given a glimpse of what happens to the men once they are submerged in the black pool. This time, the victim is seen floating underneath the surface of the liquid, seemingly uncomprehending of what is happening to him. In contrast to the baby's cries, there is complete silence in the scene, almost suspending the viewer in the liquid with the man. The victim is in the unutterable, inexplicable nothingness. He sees one of the other victims also floating there. He touches the other man, who it turns out is nothing but skin, an empty grotesque vessel. It is a nightmarish

scene whose intensity is increased when the victim then begins to float down a fast-moving, aqueduct of red water, presumably blood and flesh.[84] Finally, the colour red envelops the entire screen before turning into a solid red line on a black screen (Figure 13), echoing Newman's zip paintings (Figure 14).

As discussed in Chapter Three, Newman sought to place the sublime in the 'now', in a place devoid of objects such as in his own artworks, something that can be observed in the black-and-white screens used in *Under the Skin*. This may seem to be an ironic contradiction of the placement of transcendence as related to the concept of 'there' in Sobchack's version of the cinematic sublime. However, as shown in Chapter Three, Newman's zips call forth another realm, speaking to something *beyond* the flatness and 'now' of the rest of the painting. Therefore, there is transcendence in immanence present in both Newman's paintings and the voids used in *Under the Skin*.

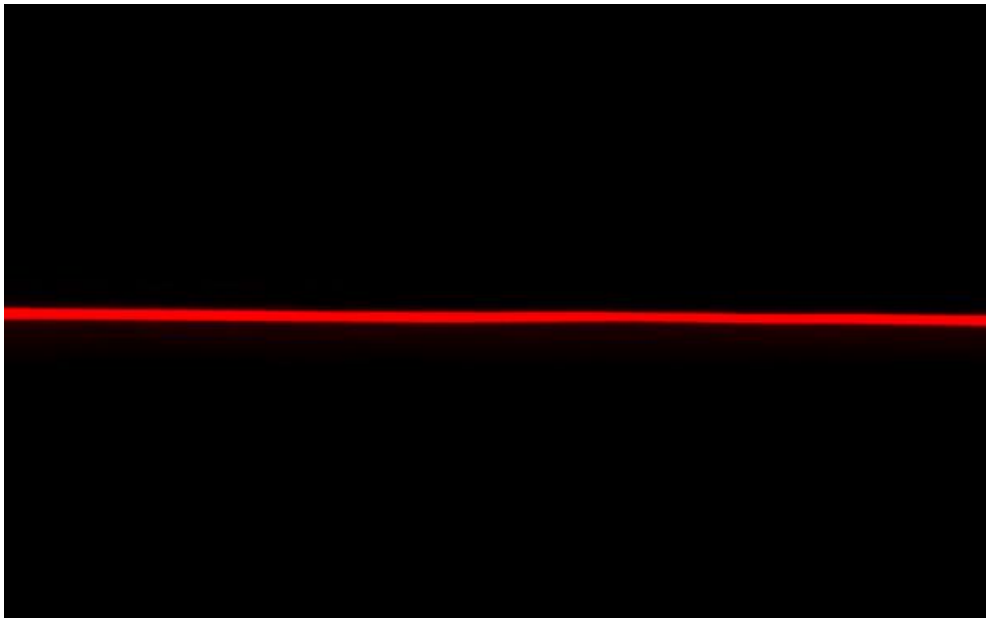

Figure 13: The river of blood that turns into a solid red line, *Under the Skin*. 2013. Screen shot by author.

[84] While this might classify *Under the Skin* as body horror, the film also conforms to Sobchack's (1987:38-39) statement that the creature is viewed "dispassionately [in which] the aesthetics of destruction please us as a well-mounted slide might please a scientist… Terror is replaced by wonder… the fear in SF films springs from the future possibility that we may – in a sense – lose contact with our bodies…". This is part of what gives this film an SF 'feel'. The sex scenes are dispassionate, the killings almost matter-of-factly. The alien is a monster but also a creature, something that is presented to the viewer as being on "a removed aesthetic level" (Sobchack 1987:47).

Figure 14: Barnett Newman, *Adam*, 1951-1952.
Oil on canvass, 2,429 x 2,029 m.
Tate Modern, London.
(Tate website 2018b).

The film expresses ideas around the binaries that often accompany SF film and the science fiction sublime specifically. The title refers to something unseen, beneath the boundary of skin. The figure of speech "under the skin" could refer to how another person may have a negative, irritating effect on the subject by getting under their skin. Another way to interpret the title is to contrast it with the term "skin-deep" as used to mean superficial, with "under the skin" meaning to get to the essence of something, exploring depth, deriving meaning. Lieke Hettinga (2016:20), in reference to Shildrick, states that the skin is "a site that usually functions as a boundary between subjects and/or objects [which] might falter: something is able to pass through this boundary, getting under the skin. The skin creates the fiction of the unitary containment of the body". The skin of the alien in this film is a place where the boundary falters: Her skin is human but what is beneath is not. The boundary between human/alien becomes blurred and yet the two are not conflated. There is a liminal space or gap between human and alien, and indeed also between the viewer and the screen. The space is analogous to the void that untethers the viewer. As argued in the previous chapter, the sublime may be found in the liminal space or gap between or beyond boundaries. The SF sublime is roused by focusing on the empty skin of the woman's victims, a reminder to the viewer of their carnal being and of the materiality of skin, creating a sense of immanence. At the same time, the unknowable nature of the alien beneath human skin relates to the immaterial or unnameable void (it is only

later in the film that the viewer gets to see the unknowable beneath the skin). The plot represents this gap while the special effects use the gap to evoke the sublime.

The woman's facial expressions or lack thereof (almost like a blank canvass itself) are cues as to the progress in her journey. While the woman is able to smile and appear friendly when picking up her victims, her face is completely devoid of expression when she is alone and when she is seducing the men inside the black void. As the film progresses, the woman appears to become more human and 'humane' and micro-expressions, like curiosity pierce her impassive gaze. The first instance is when she picks up a man with severe facial disfigurement. While she does not seem to sympathise, what makes the encounter striking is that she treats him like she does everyone else, even this man who hides underneath a hoodie and who shops at night to avoid being seen. While the Deformed Man (as he is referred to in the script) is seen walking into the pool, naked, the viewer anticipates the same fate for him as for the others. The next scene shows the alien staring at her face in a tarnished mirror, as if seeing herself for the first time (Figure 15). The cinematographer has up to now repeatedly shown the woman's face in the rear-view mirror of the van but this is the first time she looks at herself directly. It is a scene that recalls Jacques Lacan's mirror stage in which a toddler first recognises themselves in the mirror. This phenomenon has two results: "it marks a decisive turning-point in the mental development of the child… [and] it typifies an essential libidinal relationship with the body-image" (Lacan 1953:14).

It is after she first stares at herself in the mirror (an image that is repeated later), that the viewers' expectations are destabilised when the Deformed Man is set free instead of being killed, though the motorcyclist goes after him later when the alien fails to consume this victim. It is during this particular black room scene that the viewer first gets a glimpse of the alien's real body, a charcoal-black 'creature' that blends into the background. David Roche (2017:53) argues that the scene in which the alien and Deformed Man are in the van "is where the fault lines caused by interstitiality – by the breaking of the boundaries between 'human' and 'inhuman', 'normal' and 'monstrous' – tear the fabric of the film, which is why the narrative takes a turn after this scene". There is a movement from presenting the female human ('her') as the alien (or the 'it' or 'thing') and then from the middle of the film inverting this and progressing from presenting the 'thing' as a human, or as 'her'.

Figure 15: The alien stares at herself in a tarnished mirror, *Under the Skin*. 2013. Screen shot by the author.

During the disconcerting scene with the baby on the beach, the alien is certainly an 'it', something monstrous that refuses to comply with the expectation that all women are mothers, an unsettling subversion. Ara Osterweil (2014:48) argues that both the alien and the film itself boldly refuse "the 'universal' appeal of the child and… [suggest] a more radical identification with alterity as the key to human empathy. This emotion arises through an encounter with disability, when the alien temptress meets a man so grossly disfigured that she is finally able to experience a form of kinship that gives way to kindness". She, the alien other, recognises herself in the Deformed Man's otherness.

Another scene that seems to prompt the woman's interest is when a hawker sells her a rose while she is sitting in traffic. The rose pricks her and she stares at the drops of red blood that form, a clear sign that though she is presented as the one that is powerful and the predator, her 'skin', her outer shell is vulnerable human flesh. It is a scene that elicits a visceral reaction even in its simplicity, a reminder of the tactile and haptic. The alien's curiosity allows the viewer to see familiar things anew, linking to the principal of ostranenie discussed earlier in the study.

Anxiety permeates the film, a condition that may precede the terror necessary for experiencing the sublime. The anxiety is created by making the familiar and the known seem alien and uncanny. It makes that which is normally comfortable or taken for granted into something to be feared or mesmerised by, particularly things that exist in the present of the film, for example, the street scenes that represent lived reality. The endless, disembodied spaces of the black

room are contrasted with the mundane and everyday, the latter of which serves to 'ground' the viewer. For example, the woman walks down a busy street, trips and falls and then is helped up by strangers. This seems to amaze her. The diegetic sound of conversation and traffic buzzing, instead of the screechy leitmotif or the eerie silence, also contrasts with Burke's sublime around privation (silence and darkness), during which terror is induced because of the deprivation of the senses. There are a number of shots of ordinary people going about their day, carrying their shopping, waiting for buses or speaking on their cellphones. This again may serve to bring viewers back to the present, returning their ordinary senses of sight and sound to them. It is during these kinds of scenes that the sense of the uncanny takes place. As Sobchack (1987:109) explains, "[u]sing a minimum of special effects, if any,… [such] films evoke wonder in their visual ability to alienate us from Earth's landscape and from human activity and from the people next door". The viewer is forced to see the ordinary anew. However, slowly, as the scene progresses, the non-diegetic music begins to filter through and again, we see the iris of an eye, this time filling up with black liquid, as if with ink, creating the recurring void. This section of the film moves the viewer from transcendence in the nothingness of the black void to immanence in the 'presentness' of the everyday here and now, and back to transcendence in a blackness that is absolute.

From this point on, the alien abandons her mission and instead she leaves Glasgow behind to explore. She drives around but looks slightly perturbed and appears as if in a daze. She stops at the beach and walks into the fog, which this time creates a white void where there is an absence of figuration. Next, she is seen waiting at the side of the road, looking vulnerable. The camera moves to an extreme long shot/panorama where her very small figure is seen walking down a road that cuts through the stark landscape like a zip, once again echoing Newman.

Next, the alien starts doing ordinary things like going to a coffee shop where she tries to eat cake, with the camera lingering on a close-up of her mouth as she is about to put a fork in it, playing on the viewer's sense of touch and taste. However, she is unable to swallow and retches the cake back up. She appears all the more defenceless when she is on a bus, confused, having somehow lost her coat. When a man asks her if he can help and she agrees, the viewer immediately recalls her own trawling for prey. The audience is keenly aware, though the alien is not, that being in a woman's body makes her vulnerable. However, the man turns out to be a good Samaritan who takes her home, cooks for her (though she leaves the meal untouched) and gives her a spare bedroom. There, she undresses and stares at her own naked body in a mirror, for the first time really exploring it, extending her limbs, moving her hands and neck, subjecting herself to her own gaze even as the scene seems to fight against

hyper-sexualisation. Again, this recalls Lacan, as the alien appears to try and reconcile her alien self (the alien other) with the human self, resulting in a kind of fragmentation of identity as there are many human things she cannot participate in, such as eating.

Therefore, in the bedroom scene, the subject of the gaze is treated in a way that defies the male gaze. Within the science fiction sublime, particularly involving alien films, the male gaze may either be present or subverted through the representation of the female body and of femininity. Hettinga (2016:23) argues that during the first half of *Under the Skin*, the alien defies the expectations placed on her and her body:

> She is a sci-fi femme fatale who uses the status of the female gendered body in Western culture for the purpose of her extraterrestrial mission. The explicitly voyeuristic nature of her encounter with men on the street undoes the male gaze we are accustomed to in Western visual culture, and the viewer conspires with her objectifying stares. The viewer might fear for her safety, but the alien has yet to discover the dangers of misogyny...

The feminine sublime, as described by Freeman (1997:2) in Chapter Three, resists categorisation, where the subject, in this case, the alien, "enters into relation with an otherness… that is excessive and unrepresentable". The alien overturns the gaze as described by Mulvey and indeed, the viewer in *Under the Skin* sees the world through an alien's eyes. Furthermore, the alien's female body may be a reminder of the corporeality that is key to the science fiction sublime, due to the visceral representation of her nudity. Osterweil (2014:47) states that the choreography in the film implies that the alien's gaze is not unconscious or programmed but one of agency and purpose (as demonstrated by her curiosity in the ordinary):

> In so doing, *Under the Skin* advances a genuine phenomenology and politics of desire: to be human is to be embodied. To be embodied is to experience corporeal sensations that create the conditions for desire. To experience desire is to begin to see the world differently. To do so is to threaten conventional hierarchies. In the end, this is a form of agency often met with violent resistance.[85]

Another example of the alien's fragmentation of identity and another point of resistance happens the next day when the man and the alien try to have sex. She cannot be penetrated, with the film suggesting she may have no female genitals. Both her inability to have sex or eat normal food defamiliarise her, reminding the audience that even though she is acting human, she is not. Jonathan Romney (2014:[sp]) states that the film is an example of "'Martianism',

[85] Sobchack (1987:47) refers to Margaret Tarratt, who views the SF creature film as "the embodiment of the sexual and unreasoning animal within which threatens domestic harmony, and its attendant sedated and institutionalized sexuality". *Under the Skin*'s inversion of male and female roles threatens the traditional familial order and the engendered roles of the male as predator and the female as prey.

[which allows]… us to see a familiar world as profoundly strange: Glazer's alien encounters several aspects of earth culture that she finds inexplicable (a TV clip of Tommy Cooper) or literally indigestible (Black Forest gateau)". Other examples of defamiliarisation or "Martianism" include an ant the alien picks up from the dead woman's body at the start of the film, as well as a fly she sees buzzing at a window just after she decides to free the Deformed Man. The fly and ant are very ordinary things made strange to the audience, which looks at everything through the alien's eyes.

When the alien fails to have sex, she appears to be perplexed and looks between her legs. Previously, the alien only promised the possibility of sex in order to devour her victims. But her sexual encounter with the good Samaritan is voluntary and she does not seem interested in harming him. It is unclear what the alien's motive for the attempted sex is, whether it is curiosity or whether she actually experiences desire. When she is unable to consummate her 'relationship' with the man, the alien seems to be disturbed. She is unable to reconcile her human self with her alien self (a fragmentation that ultimately results in her destruction). She runs off into a forest where she meets a logger who tells her about the hiking trails and that she should be safe from getting lost. The alien comes across a cabin set up for hikers to take a break. She lies down and falls asleep while apparently dreaming of the forest. Two shots – the one of her sleeping and the wind whipping through the trees – are laid over one another like a double exposure, giving a sense of the sublime through the breakdown of boundaries, as the outside (the forest) penetrates the inside (her dream). There is a suggestion of immanence, with the alien being embodied while sleeping, and transcendence, as she dreams of the forest (Figure 16).

Figure 16: A shot of the wind blowing through the forest overlaid with a shot of the alien, *Under the Skin*. 2013.
Screen shot by author.

Then, the alien is suddenly woken up by a hand on her leg. It is the logger who wants to rape her. She runs away through the forest and tries to hide but he finds her and sexually assaults her. In the process, he tears loose some of her skin and the viewer finally clearly sees what is beneath: The charcoal-black body. Frightened, the attacker flees. The alien is shown stumbling away, taking off the rest of her 'skin suit' until the camera shows the alien staring at her human face, a comment on her doubly-inscribed identity (Figure 17). The expression on the human face is one of trauma and confusion, incomprehension at what has happened. The viewer too is trying to make sense of the horror of what has occurred, an example of the ineffable nature of attempting to represent the terror of the sublime. When the human skin comes off, the alien has a kind of exchange with herself, but at the same time, with something (the human flesh) which is also not really herself – an encounter of the self as other, in this case, an alien other. It is a moment in which the boundary or liminal space between alien and human blurs. The scene is a key moment, with Glazer (Filmnation Entertainment 2013:15) explaining that the script read:

> 'The inside looks at the outside, the outside looks at the inside'. That was the kind of apex. It definitely felt like everything needed to climb to that point. But I didn't want you to think, 'Ah, so that's the alien'. I wanted the alien to remain alien. When you see what happens at the end of the film, you're simply looking at another layer, which I think protects its alien-ness. If not, it's no longer alien, is it?

Figure 17: The alien stares at her human face, *Under the Skin*, 2013.
Screen shot by author.

What the viewer is shown consistently results in dislocation and a questioning of what is presented by the camera. In the scene where the alien body is revealed, the viewer is not only confronted by alterity, by the alien other, and the woman as other, but also by the self as other. Richard White (1997:140) states that "the experience of the sublime really forces the individual back upon herself, in an age when the dissolution of the subject has apparently been ordained. The experience of the sublime is thus the model for the experience of otherness itself…". As previously argued in Chapters Three and Five, there is an oscillation between binary opposites in the sublime, such as between the material and the symbolic because the space between the boundaries (just like Newman's zips) – even when blurred – is where the sublime may be found.

Following the attack, the alien limps out of the forest into the snow but the logger reappears, carrying a can of fuel. He pours it over the creature and sets her alight. She makes no sound during the immolation, contributing to a sense of the uncanny, as there might be an expectation for her to scream or to make sounds indicating pain. An extreme low shot shows white snow falling onto the camera lens – as if about to fall on the viewer – while smoke from the alien's body blows into the air, which is nearly completely white with fog and snow. For more than 30 seconds all the viewer is shown is the flat whiteness of sky with only the falling snowflakes to break it up. The motorcyclist is standing at a distance, impassively looking around, possibly searching for her.

Despite her horrifying, monstrous actions, the killing of the alien, rather than the killings of the men, is the one that is most jarring. Indeed, for all the subversion of the gaze and of feminine desire that occurs in *Under the Skin*, the alien appears to be punished for her lack of fear of men. She is sexually assaulted and then killed in a gruesome manner. She is erased, the fear of her and her alienness overcome. Furthermore, the representation of the sublime through the alien's body ends at the same time as the sublime moment is about to end with the film's conclusion. Sherryl Vint (2015:9) argues that "the violence that destroys her is shocking and excessively aggressive. The binaries of human/alien, self/other, and even male/female are destabilised by this film, which compels us to have compassion for the alien in spite of the fact that she remains alien, not because she has been successfully humanised". There is much about the film that is disturbing and terror-inducing, including the fear of the alien other but also of the posthuman. However, the sublime visuals make the film entrancing and almost compel the viewer to watch.

What makes *Under the Skin* different from many SF films, is that there is less of an emphasis on showing off CGI special effects, because many of the effects were shot on camera: The black room and pool were built specially, lending an air of verisimilitude to the film. However, these visuals, due to their strangeness, may still evoke feelings of the SF sublime even as the sublime is also represented thematically. Osterweil (2014:46) states that the film is effective in defamiliarisation of because "the viewer's own gaze is at least triply mediated to see the world simultaneously through alien eyes, the van's windshield, and the lens of the camera".

Visually and diegetically, the film may evoke Burke's sublime through the gloomy, dark lighting which deprives the senses. Kant's mathematical sublime may also be evoked in the representations of infinity in the black room, black screens or white voids. This may result in a transcendental experience as the viewer feels 'ungrounded' in the void but then is able to overcome this through Reason. The void in the Kantian mathematical sublime is akin to the imagination's fear of the transcendent abyss, a fear of being lost in the void (as referred to in Chapter Two) but which is overcome by rationality resulting in "the same amount of *attraction as there was of repulsion* for the mere sensibility" (Kant 1914 [1790]:§27, emphasis added).

However, I argue it is the SF sublime, which articulates how both immanence and transcendence may be found in the same artwork, that best describes *Under the Skin*. Morley (2010a:[sp]) echoes Kant's language, stating that the sublime can be found in a black nothingness, a zone that is unsettling, something that is also uncanny as it foregrounds the limits of what viewers may be able to understand. But, beyond that, in the science fiction sublime the black and white voids untether the viewer from the present. In the cinema, it feels

as if the viewer is either floating in the void or being enveloped in it, resulting in a sense of disembodiment. These voids are representative of a gap within which to experience the science fiction sublime, as argued in Chapter Five. At the same time, there are constant reminders of the material and sensuous, for example, the skin of the alien's victims.

Nevertheless, as argued in Chapter Three, the sublime may be viewed as unrepresentable and ineffable, raising the question of how something visual may then evoke the feeling of the sublime. In *Under the Skin*, the shots of the alien and her victims in the voids, an absolute vacuum or emptiness, are examples of something between figuration and abstraction (Taylor 1992:284) and are what help to evoke the sublime through creating a sense of transcendence. Taylor (1992:290-305) attempts to address the complexity of representing nothingness by asking how the desertion of "the Absolute", as presented in voids may be figured, proposing that the work of Anselm Kiefer's "disfigured canvasses" could represent an answer through inscribing a terrifying "nonabsent absence that is always lacking", where there is a "separating-uniting incision [which] opens the space and releases the time of representation". The sublime occurs within this space, in the void that makes no sense. The void is something formless and unutterable and terrifying beyond which a promise of the divine (transcendent) lies. There is a vacillation between absence (the black or white screen, or in Taylor's terms "abstraction", the absence of figuration) and presence (the figures of the alien and her victims, or in Taylor's terms "figuration" or the absence of abstraction). The film makes a promise of transcendence by making the viewer feel as if they are suspended in the void and yet, the film also invokes immanence by grounding the embodied viewer in the here and now with scenes of the ordinary, as well as through shocking and distressing scenes like with the crying infant and the play on the viewer's senses. I would, therefore, propose that the science fiction sublime is evoked within the gap between transcendence in immanence.

The sound design in *Under the Skin* aids in evoking and representing the science fiction sublime. As previously stated, the diegetic sound of everyday Glasgow serves to ground the viewer while the absolute silence in some scenes serves to untether the viewer and adds to a sense of alienation. In addition, the non-diegetic soundtrack also adds to the sense of alienation. Composer Mica Levi used mostly string instruments and percussion-like cymbals to create the sound. Sean Redmond (2016b:[sp]) refers to the leitmotif as a "beehive effect [which] exists in what can be defined as a 'sound *en creux'*, or 'sound in a gap', whereby the orchestration exists in dissonance and contradiction with the *mise en scène*". Hence, the uncanny non-diegetic soundtrack and leitmotif add to a sense of disembodiment and alienation. Again, the notion of the gap, which is key in the contemporary understanding of the sublime especially in science fiction, arises.

In addition, a sense of the uncanny and of horror is presented through the sound of the baby's cries, more terrifying and shocking than the alien's murder and consumption of her male victims. Redmond (2016b:[sp], emphasis added) calls this scene a "holding onto air" moment, which occurs when something is so awful or distressing to watch, "that one feels the need – the unstoppable, thoughtless urge – to reach out and hold onto the *nothingness*. This is not a screaming moment or a time for looking away from the screen… It is a moment of deafening silence and absolute centeredness. One's eyeballs ache and one's fingers and hands reach out towards the horror that one is experiencing. One's breathless silence is in marked contrast to the noise before one". The cries serve to destabilise the self through challenging the notions of what it means to be human, i.e. responding to the cries of the vulnerable young. Once again, there is a paradoxical shift between two states: One in which the viewer may block out noise through shock while the tragic cries of the child serve to ground the viewer in the present moment.

The theme of the alien(ation), which is the most obvious in this film, also serves to represent the science fiction sublime. Furthermore, there are elements of the theme of the fear of the future, including of an apocalypse. Hettinga (2016:28) argues that the film "is intensely situated in the present-day, but by virtue of its science-fiction genre and futuristic elements [it] often comes across as an anachronism, inhabiting both the present and future at once". The sense of an apocalypse or end-of-world feeling is intentionally created by shooting in stormy and bleak weather (Glazer cited in Filmnation Entertainment 2014:[sp]). By making the viewer watch the world through the alien's eyes, even a storm may regain the ability to evoke the sublime through ostranenie. When the snow falls on the camera lens, the viewer may feel they are inside the storm, and yet, the lens and the cinema screen provide the necessary distance between subject and object that is required for the experience of the sublime.

The presence of terror necessary to evoke the sublime in *Under the Skin* is the subversion of the human body, a fear of dehumanisation that was discussed earlier. Representing something that is expected (a human body) as something unexpected (the alien body) through the uncanny acts as a destabilising force. Sobchack (1987:121, emphasis in original) states that "[w]e expect unnatural behaviour from something seen as unnatural, alien behaviour from something alien. What is so visually devastating and disturbing about the SF films' 'taken over' humans is the *small*, and therefore terrible incongruence between the ordinariness of their form and the final extraordinariness of their behaviour, however hard they try to remain undetected and 'normal'". This relates to the uncanny sublime, through what Redmond (2016a:37) calls "a flash of insight in which one re-sees something familiar as if seeing it for

the first time; it may be the familiar rendered strange [alienation], uncanny, as less or more than the experience it has previously registered".

6.2 *Tron: Legacy* and technophobia/technophilia

Tron: Legacy (2010), directed by Joseph Kosinski, is the sequel to 1982's *Tron*, the latter of which was considered ground-breaking for its depictions of digital space. While the term "cyberspace" was yet to be coined by William Gibson when *Tron* was released, the film takes the viewer into the mainframe and server of a particular computer and visualises programmes as characters. However, while the special effects are still hailed for being visionary for its time, decades on, the visuals look decidedly flat and two-dimensional. *Tron: Legacy*[86] sought to update the story with 3D CGI special effects and surround sound, screened in IMAX theatres. The story again takes place inside a server, known as The Grid, and imagines what it would look like to enter the unseen digital world.

Tron: Legacy begins with a flat black screen as a man narrates:

> The Grid. A digital frontier. I tried to picture clusters of information as they moved through the computer. What did they look like? Ships? Motorcycles? Were the circuits like freeways? I kept dreaming of a world I thought I'd never see. And then, one day... I got in. And the world was more beautiful than I ever dreamed and also more dangerous than I ever imagined (Kosinski 2010).

As the man speaks, single blue lines begin to move across the void of the black screen, crisscrossing each other until they begin to look like a bird's eye view of city blocks and streets (Figure 18). The narrator is the character, Kevin Flynn (Jeff Bridges), who is telling his young son, Sam, about a brave warrior Flynn met inside the Grid named Tron, who "fights for the users". Together the two built a new Grid for programmes *and* users. Flynn explains he cannot be inside the Grid at all times so he created a programme "in my own image that could think… called Clu – Codified Likeness Utility… And Clu, Tron and I, we built the system, where all information was free and open" (Kosinski 2010). During the narration the non-diegetic music is pacey and energetic, with an electronic sound, reflecting the idea of cybernetics or the digital space.

[86] *Tron: Legacy* might interchangeably be referred to as *Legacy*.

Figure 18: Moving blue lines on a black screen representing the movement of data (the Grid), *Tron: Legacy*. 2010.
Screen shot by author.

Flynn (who was the main character in the original *Tron*) describes a democratic and utopian vision in the first few minutes of the film, of a system that is fair and rational and information that is available to everyone. But, one night after leaving his son to enter the Grid, Flynn disappears. As the CEO of Encom, which designs the popular Tron video games, the disappearance is big news but Flynn never returns. However, one of the other company executives, and Flynn's friend, Alan Bradley, insists Flynn is not missing but is instead pursuing his dream of "a digital frontier to reshape the human condition".

The film jumps forward to when Sam (Garrett Hedlund) is older. Encom has changed and wants to launch on the Nikkei stock exchange, meaning its brand-new operating system (OS) will not be free. Sam hacks into the mainframe, copies the OS and distributes it for free on the internet, before escaping from the top of the Encom high-rise building with a parachute. The effect in 3D is, as expected, one that makes the viewer feel as if they are falling with Sam and is the first of the effects to really draw the viewer into the film.

Sam discovers a secret door at his father's old Tron video arcade, which leads him to an underground office full of old electronics (fans of the first film will recognise the room). When Sam touches a digital keyboard, it opens a camera lens which shoots out a laser and suddenly he is falling through the Grid: Fast-moving 3D representations of code (Figure 19) that appear to jump out at the viewer. Proprioception lets the viewer feel as if they are moving through the Grid with Sam.

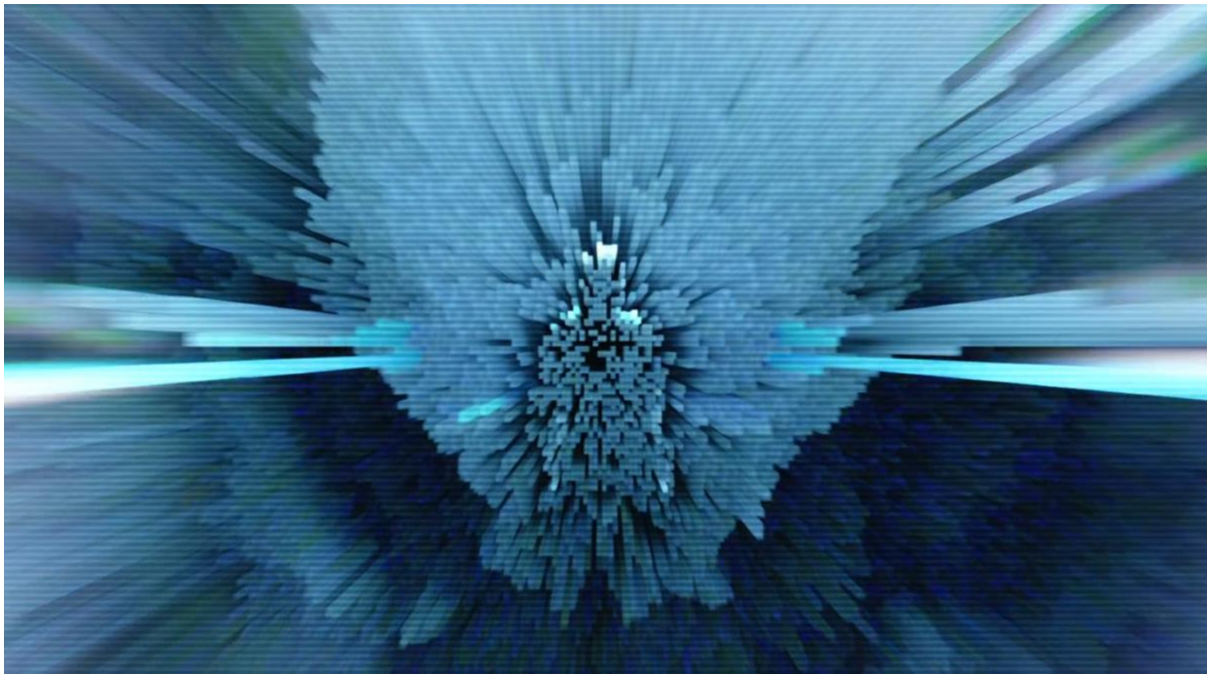

Figure 19: 3D renderings of code ‘shoot out of’ the screen at the viewer as Sam falls through the Grid, *Tron: Legacy*. 2010.
Screen shot by author.

Sam finds himself in a dark world permeated by electronic blue, white and red lights. These tones permeate the film, a constant visual reminder of the dislocated space in which both Sam and the viewers find themselves. It appears as if Sam has been transported to a dystopian cityscape, where the neon lights and electric ‘thunder’ and ‘lightning’ against a black background recall the rainy cityscapes of *Blade Runner* (Figure 20). The camera spins around on its axis several times, further dislocating the viewer. Almost immediately, Sam is taken prisoner by robotic-looking ‘soldiers’. They refer to Sam as a stray programme, despite his insistence that he is not. The electronic world is reminiscent of the movement between absence (the initial lack of figuration in the dark world) and presence (the figuration of the buildings and soldiers through the lights that outline them) that Taylor refers to. Kosinski echoes Kiefer’s approach to art by neither erasing nor absolutising figures but “[using a] figure with and against itself to figure the unfigurable” (Taylor 1992:299). The unfigurable here refers to the code making up data and programmes.

Figure 20: The Grid is represented as a dark cityscape reminiscent of *Blade Runner, Tron: Legacy*. 2010.
Screen shot by author.

Sam is taken to a type of arena where 'games' are held. He is given a special uniform and a disc, which is a hard drive that records all his data, something he cannot lose if he wants to survive because he needs to use it as a weapon to fight. Sam is thrust into the arena filled with cheering crowds (with actors representing 'obedient programmes') to fight a programme for entertainment in what is called "Disk Wars".[87] Sam is constantly being watched by some kind of leader or overlord who is dressed in a suit with red lights and whose face is obscured by a visor, reminiscent of Darth Vader in *Star Wars*. This intertextuality occurs across the film. The audience, along with Sam, experiences extreme disorientation when the cage he is fighting in rotates and he has to do battle upside down. There is a sense of vertigo and dislocation created in the viewer. After another warrior wounds Sam, blood is seen dropping from him which leads to the programme warrior recognising Sam as a "user"/human. He is taken to face the leader, who takes his mask off. Initially, Sam thinks it is his father but it turns out to be the copy of his father, Clu. "I'm not your father, Sam, but I'm very happy to see you", Clu says in another *Star Wars* reference.[88] It becomes apparent quickly that Clu, who is referred to as the "liberator" of the programmes, is no longer a force for good but rather Kevin Flynn's evil mirror. There is a further reference to *Star Wars* when Sam is forced to fight Clu.

[87] The concept is reminiscent of the *Hunger Games* films, the first of which was made in 2008. However, the *Tron: Legacy* filmmakers have not cited *The Hunger Games* as a reference. What may perhaps be inferred is that in dystopian films, the need to compete, fight and kill for entertainment is a recurring theme. It is a theme also found in dystopian/post-apocalyptic films like the *Divergent* series and *The Maze Runner* series.
[88] One of most famous lines in the original *Star Wars* trilogy is when the evil overlord, Darth Vader, drops a bombshell on the hero, Luke Skywalker, saying "No, I am your father".

They are each given a weapon that looks like a stick and Sam, in his ignorance, tries to wield it like a lightsaber, the weapon used in *Star Wars*.

The fight begins with two teams, with the 'good' programmes and Sam dressed in suits with white lights while the 'evil' programmes are dressed in suits with orange-red lights. The 'sticks' turn into motorcycles (a throwback to the original *Tron*) and suddenly the battle is like being inside a 3D arcade game as the film makes manifest the digital, with sounds that recall video games (Figure 21). It is the unrepresentable (digital information) being represented.

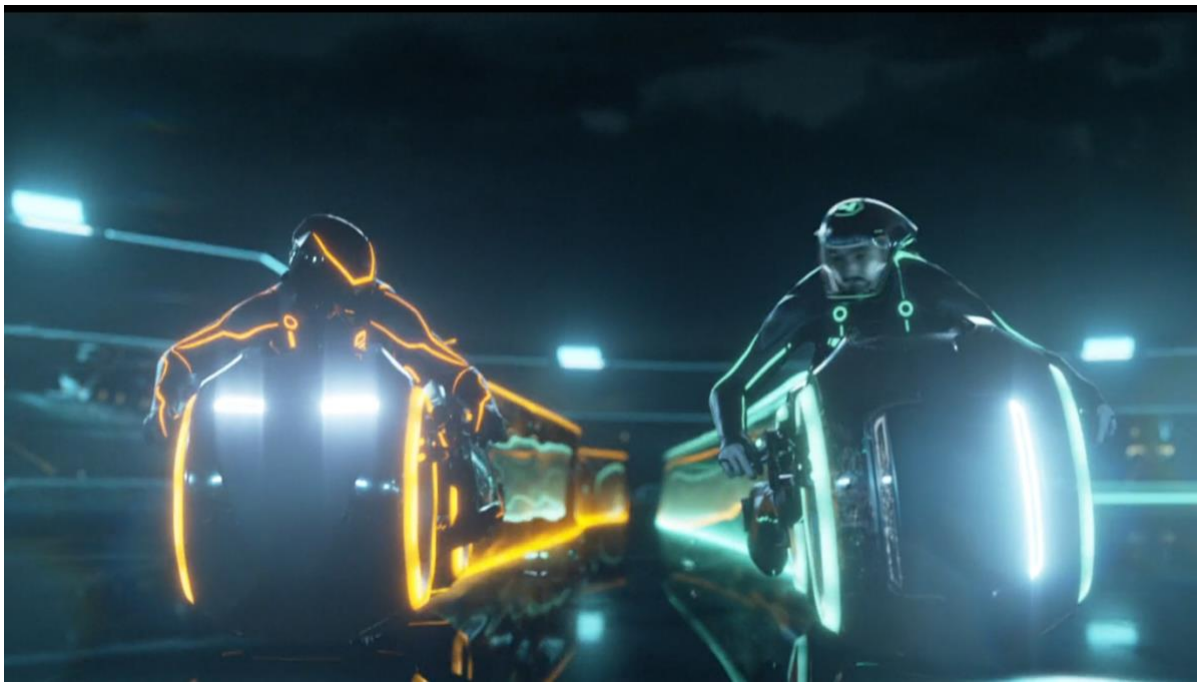

Figure 21: Data comes 'alive' with battles inspired by arcade games, *Tron: Legacy*. 2010. Screen shot by author.

The fighters drive around inside the Grid, which becomes an awesome and wondrous space inside the cinema that overwhelms the senses like the mathematical sublime. Wood (2014:36-37) explains how the 3D cinematography further serves to immerse the viewer in *Legacy*, particularly the disc battles and motorcycle chases:

> Both are created using a sense of gravity and dimensionality that is modelled on the actual world. In the disc battle sequences, a mobile camera moves viewers into and out of the action sequences. When Sam fights Rinzler [the warrior who wounds him], the shots reframe according to both the movements of the figures and the changing orientations of the platform.

After his entire team is 'killed', Sam is saved by a beautiful woman called Quorra (Olivia Wilde) and driven away from the Grid into a desolate landscape lit only by the occasional bolt of 'lightning'. This dark landscape becomes akin to a void, where the lightning and the headlights of the vehicle cutting through the landscape become like the zip beyond which something, the

enticement of transcendence perhaps, lies. Sam is taken to a kind of lair or safehouse where he finds a man meditating, his real father (indicated by the fact that Flynn is older than Sam remembers him unlike the smooth-faced Clu).

The safehouse, in contrast to the dark surrounding landscape, is nearly all white. This too is reminiscent of Frost's (2011:[sp]) "act of representational negation" in which something is both present and absent. The viewer is present in watching the film and but is also pulled 'into' the screen through the 3D filming, creating a feeling of leaving the body behind (absence). There are also reminders of anxieties, the terror represented by a blankness. The white lair is a doubly-inscribed and paradoxical space: It exists as an actual safe space for Flynn and Sam in the film, but it is also a non-space or imagined space for the characters and the viewer, a space which may also feel to the viewer as if it is there, as if it exists, yet it does not. In order to make the white lair seem more familiar, there are objects like physical books and, in another intertextual reference, Quorra pulls out her favourite: Jules Verne's *The Mysterious Island* (1874) which sees a group of adventurers get lost in a storm on an uncharted island where they have to survive various travails. The book mirrors how the characters in *Tron: Legacy* are 'unmoored' in a non-space, fighting to survive through adventures that resemble games. The books are also ordinary and familiar objects made strange via the setting, evoking the science fiction sublime. Another such defamiliarisation occurs when Sam, Flynn and Quorra eat dinner, with the meal consisting of recognisable food like beans and an elaborate pig roast but accompanied by a strange blue liquid as the drink. These objects result in cognitive estrangement, another characteristic of the SF sublime.

Flynn explains that he has been trapped in the Grid after sending his human form into digital space. His naive and idealistic vision was for Clu to create a perfect world, a paradise. But, an unexpected miracle happened: A kind of lifeform that manifested on its own in the Grid, called ISOs (isomorphic algorithms), actual ghosts in the machine. Flynn says:

> For centuries we've dreamed of gods, spirits, aliens, an intelligence beyond our own… I found them in here. Like flowers in a wasteland. Profoundly naive. Unimaginably wise… I'd been living in a hall of mirrors. The ISOs shattered it. The possibilities of their root code, their digital DNA. Disease? History. Science, philosophy, every idea man has ever had about the universe up for grabs. Bio-digital jazz, man (Kosinski 2010).

Therefore, just like humans with evolution, the conditions were right for ISOs to appear. This description humanises what might otherwise be labelled intelligent and conscious code. One of the producers, Steven Lisberger (Tron: Legacy… 2018) calls it "a cyber Galapagos, that's evolved on its own". However, Clu, who was programmed to pursue perfection, did not want to settle for random pieces of what he considered corrupt or imperfect code, no matter how

profound. Clu staged a coup and massacred all the ISOs bar one, Quorra. Flynn was unable to escape because the more he fought Clu, the more powerful Clu became. In contrast to the highly-defined and 3D visuals of most of the film, Flynn's memory flashbacks are very pixelated, as if it was taking place in a 1980s movie or video game. This reminder of two-dimensionality may serve to ground the viewer again through its extreme contrast to the rest of the film. The pixelation recalls the fact that the screen is a surface made up of small dots, though new technologies make them appear invisible. The viewer is reminded that the screen is something material on which something immaterial (data) is represented. During the flashbacks, the exchange that happens between the screen and viewer changes: Instead of being pulled 'into' that screen to feel suspended in the world of Tron, the audience is taken back to the seat of the cinema.

The portal through which both Flynn and Sam entered the Grid can only be opened from the outside and it only remains open for a short period. The three devise a daring escape plan, one that is very dangerous for Flynn because Clu will stop at nothing to obtain Flynn's disc and all the information on it. As the Creator, Flynn's disc is a master key and would allow the programmes in the Grid, including Clu, to enter the real world and control it. Sam argues that it would be possible to delete Clu once they have escaped through the portal at the push of a keystroke.

There are multiple double messages about what it means to be human in this film. The Grid is a space where AIs 'live' and the fear represented is that of whether programmes and intelligences created by humans are able to supplant humanity. Another example is during a battle on the way to the portal when Quorra is injured and seems to become like a limp, dead doll. When Flynn tries to fix her, the code he pulls up from her looks like a strand of DNA, except instead of a double helix, hers is a triple helix, a signifier that perhaps she is more human than human or somehow 'better' than human. After she wakes up, Quorra has a conversation with Sam about how she would love to escape to see a real sunset. This brings to mind the typical plot of a robot/AI acting like a human and wanting to be human, as mentioned in Chapter Four.

When the trio arrives at the portal, Clu is already there with an army made up of repurposed bodies of ISOs. Their formation is reminiscent of the stormtroopers in *Star Wars*. Clu addresses them and explains he wants the programmes to take over the world. A digital representation of a red Earth, of what the new future would look like, is shown. Jody Duncan (in Ndalianis 2015:155) states that the film "'anthropomorphi[ses] the computer's operations'", thereby making "'ontological connections between the electronic and the real world'".

Sam, Flynn and Quorra are caught in a battle at the portal and Flynn sacrifices himself for his son, an inversion of the biblical messiah in which the son is the one who is sacrificed. This plays off the myths of a creator-god. Kevin Flynn is the creator of the programme and is also referred to as "the creator" in the film by Quorra and Clu. Instead of a figurative *deus ex machina* or a 'save the day' that happens *through* the machine, Flynn is literally the god *in* the machine, or in this case, the virtual world of the server. He created the Grid (like the Judeo-Christian god created the world) and the Grid then became an environment that results in the creation of sentient beings – the ISOs, as if through evolution. During the battle, Flynn tells Clu that the problem with perfection is that it is "unknowable", suggesting that humans, despite their imperfections, are knowable as opposed to dangerous machines/programmes that make no mistakes and could develop themselves into anything. During the fight, Flynn destroys both Clu and himself. Back in the 'real' world, Sam copies his father's disc, ready to change the world with the information. He takes Quorra to go see a sunset, a symbolic completion of her transition to human form.

The science fiction sublime in this film also occurs non-diegetically and diegetically. Non-diegetically, the special effects like show-stopping battles and motorcycle races (or lightcycle races as the filmmakers refer to it), the landscape and digital grid revel in themselves and strive for the viewer's engagement. Diegetically, like many films on this theme, *Legacy* has a plot that contains both techno-euphoria and techno-angst. While many of the programmes like Clu are 'evil' in their quest for perfection and uniformity, there are also 'good' ones like the warrior Tron and the ISOs, which are used to ameliorate the anxieties and fears that technology will supplant humans and then aim to destroy them.

The special effects in *Tron: Legacy*, much more so than in *Under the Skin*, are of the more stereotypical kind in which the viewer is expected to accompany the characters through their journey. As he explains in the film's audio commentary, Kosinski (2010), who is also an architect, was aiming for verisimilitude with the sets: "I wanted it to feel like we took motion picture cameras into the world of *Tron* and shot it. So, I wanted to build as many sets as possible. I wanted the materials to be real materials: glass, concrete steel. So, it has this kind of visceral quality to it". Instead of working with the film post-production to make it look 3D, it was shot with 3D cameras to make it more immersive. This helps to achieve SF's fight for the viewer's belief rather than disbelief, as referred to earlier. The film's creators are asking for the viewer to 'worship' at the altar of spectacular and wondrous effects, ones that transport the viewer away from their seat in the cinema into a different world. The viewer can begin to doubt what is real or not. As part of the science fiction sublime these special effects might

evoke a space and world so spectacular, and that is so overwhelming in its intensity, that it cannot be comprehended and yet, the mind attempts to rationalise what is being experienced.

However, as with *Under the Skin*, the transcendence in immanence described by Sobchack may be an even better descriptor of the kind of science fiction sublime experience that takes place in *Legacy*. Cinematographer Claudio Miranda (quoted by Noah Kadner 2011:54) states that in order to increase the sense of proprioception and plausibility in the film, "'convergence [was treated] as a fixed point in 3D space that moves independently from focus, which makes the screen appear like a box you're looking into, and keeps things from leaping out unnaturally. Additionally, we went against the 'rule' of deep-focus depth-of-field for 3D and let our backgrounds go really soft, which helps guide the eye along with the depth cues'". Consequently, while the viewer may be aware of being in a seat in a cinema, of being embodied (even if only subconsciously), the special effects specifically work to draw the viewer towards the screen, as a disembodied subject. But, the viewer does not retain this feeling of being disembodied because when action sequences end, many of the spectacular 3D effects are temporarily lessened or suspended in order to focus on dialogue and character development. There are also other visual cues that may 'ground' the viewers again or make the viewers once again aware of their bodies, like sudden, loud sounds or diegetic sounds, like the musical soundtrack. Bukatman (1993:243) states the "imploded arenas of the datascape become the new phenomenal ground for bodily awareness. It is the experience of the body that operates to centre the subject, which is why the body must serve as the locus for any interface with terminal reality…". Even the cinema screen could be considered a place where terminal identity occurs.

The special effects in *Tron: Legacy* work in two ways. The first is to stun the viewer with their depictions of a previously unseen world and to take the viewer along into this world. But, secondly, by doing this, special effects point to themselves as technology in a positive way, i.e. through techno-euphoria. As Bukatman (1995:256) states, "[i]nspiring the sensations characteristic of sublimity, technology alludes to the limits of human definition and comprehension". The world of *Tron* and the unseen, non-space of the digital, which cannot be seen in reality, defy understanding and stretch the human imagination to its brink. This visual representation of information is part of the subject's triumph over that which is incomprehensible, through Reason.

The idea of infinity is also represented by the void, not only in the darkness of the screen contrasted with neon light, or the nearly all-white of Flynn's safehouse but also the use of the blue screen technology. Frost (2011:[sp]) states that the latter, even though it is unseen by

the viewer, represents an absence: “The colours we experience will change, but they will always be the colour of nothing” because there is “a resonant field working behind the image, an echo of a latent visuality that exists in the textual tradition of science fiction and within the digital technology used to create the effect of infinite fields”. The kind of infinity represented by the void is again related to the science fiction sublime proposed here, namely something that simply is too grand to comprehend.

Furthermore, *Tron: Legacy* may also evoke the SF sublime through its representations of boundaries and liminal spaces. A mimetic exchange is taking place involving the perception of being in a cinema and of watching a particular story taking place on screen, while at the same time being taken along by the visual and acoustic effects and representations happening on that screen (Sobchack 2008:197). As stated before, the science fiction sublime may be evoked within a gap, perhaps the gap between the viewer and the screen. In *Legacy*, there is once again a tension between the boundaries of material/immaterial, human/non-human, with the latter being artificial intelligences/programmes/data. However, the liminal space does not mean the boundaries may not be blurry and because of the oscillation between the boundaries, the interactions may appear malleable or may even liquefy. Ndalianis (2015:155) likens the visuals of *Legacy* to a baroque façade: “Fluid interactions are created between inside and outside… the façade as physical embodiment of the materiality that makes up everyday life, and the interior which operates as a mysterious link to the wonders of the sacred and immaterial”. The immaterial and space of the non-human/artificial intelligence are seen as the sacred, transcendent place where humankind may worship the magnificence of current and future technologies, the scale of which is as yet unimaginable, evoking the SF sublime. Yet, these technologies also become frightening, terror-inducing, anxiety-provoking through the plot’s related theme of techno-angst/technophobia, which represents how even perfect AI creations may go rogue and have unintended consequences like supplanting humans.

Another way in which special effects work to highlight and blur boundaries is through the actor Jeff Bridges’ face. In order to make Flynn’s double, Clu, look like a realistic younger version of him, the filmmakers made Bridges wear headgear with dozens of markers to capture the motions of his facial expressions. They also looked at photographs of him in his thirties shortly after the original *Tron* was made, which would have been a couple of years after the events in the first film and when Flynn was meant to have disappeared inside the Grid. A three-dimensional digital version of Bridges’ head was created and the markers fed into a computer so his actual facial expressions could be used for the younger version. There is a twice-inscribed blurring of boundaries and identity in using this technology: There are Clu and Flynn, the characters who mirror one another in the film, as well as the identity of the older Bridges,

the actor, and his younger self. Bridges becomes like a cyborg. The science fiction sublime is again evoked here through a movement between binary opposites. Ndalianis (2015:156) states that

> [t]he lower and the upper, the material and the spiritual are articulated through an interplay that folds: the materiality of the narrative 'real' world into the transcendent, technological and spiritual-like space of the narrative world's virtuality; and the materiality of the technology employed to give life to the fictional world that is the film *Tron: Legacy* – a special effects technology that attempts to wield its own transcendent, wondrous power for the spectator.

Therefore, the interplay between the transcendent technological space (abstraction) and the materiality of the technology itself (figuration), as well as the viewer's embodied presence in the cinema results in the transcendence in immanence necessary for the science fiction sublime. With his background in architecture, Kosinski wanted to build as many real sets as possible instead of relying on many blue screens and CGI effects, making it hard to distinguish between which effects are 'special' and which are not: "I don't want the audience to know where the line rests… if we do it right, it should be unnoticeable; it should be seamless...". (Tron: Legacy… 2018:[sp]). Furthermore, the sound effects support the blurring of lines. Diegetically, many of the programmes, particularly the 'lesser' ones, have the slightly tinny, electronic sound that robots or androids often do in this sub-genre of SF. Sound editor Gwendolyn Yates Whittle (in Wood 2014:35) is quoted as saying that the programmes "'at the bottom rung were more processed and had more digital distortion on them – they sounded less human'". As programmes become more complex, like Clu, they sound more human. Clu, for example, not only looks like Kevin/Jeff Bridges, but also sounds like him, further blurring the boundary between the non-technological and technological worlds. Quorra also sounds completely human, a signifier of her 'humanity' despite her evolution from code/data.

Not only did Kosinski aim for plausibility in his special effects by marrying real sets with CGI, he additionally aimed for some truth in whether the premise is something that has the potential to happen in actuality. The filmmakers contacted the US' National Academy of Sciences' Science and Entertainment Exchange for input about whether a human could be digitised and sent into a computer/server and then whether that digitised version could then be reconstituted into flesh (Tron: Legacy… 2018:[sp]). Scientists advised the creators that through the principles of quantum physics a process of "quantum teleportation" is possible, subject to having a computer powerful enough: "'It set off our imaginations. Science fiction is not supposed to be reality; it's an extrapolation of what is possible, intended to ignite the imagination" (Tron: Legacy… 2018:[sp]). Thus, in *Tron: Legacy*, some fact informed the fiction, again creating a blurring between real and unreal.

In addition, not only is there a blurring of boundaries represented in the film (between the real world and the Grid) and the medium (the movie on the screen and the space of the cinema), but also between fact and fiction in the viewer's lived world through transmedia.[89] Following the release of the 1982 film, two arcade games were made of the fictional games in the film, namely the *Tron* game and *Discs of Tron*. The transmedia that accompanies much of science fiction film adds to the blurring of lines. Aylish Wood (2014:33) states that the obscuring of boundaries in the films connect the technologies within the stories, with the technologies of the real world. This is illustrated by an Encom 'press conference' that was held by actor Bruce Boxleitner as the character Alan Bradley ahead of the film's release, to announce his view that Kevin Flynn lives, something he also claims in the film – a kind of guerrilla marketing strategy. Non-diegetically, the music was composed by French duo, Daft Punk, known for their pioneering work on electronic music. For the film, the band decided to use fewer synthesisers and computer-generated sounds, though these are still present, and they rather worked with orchestral musicians. This again serves to confuse the binaries of the real and unreal/electronic/digital.

Therefore, this film creates a space within which the science fiction sublime is evoked and represented by making boundaries indistinct. *Legacy* blurs these liminal spaces by asking questions about where the real ends and the copy begins. The motif of the mirror to reflect this latter question is repeated visually in *Legacy*, just as it was in *Under the Skin*. There are multiple times when Clu and Flynn come face-to-face, including a perfect mirror image when Flynn first created this perfect programme (Figure 22). If one had to look only at the image it would not be possible to tell who is real and who is the copy.

[89] Transmedia refers to other forms of media used to support the release of a film, such as books, comics, games and social media campaigns. Many blockbuster films – *Star Wars* is a prime example – make use of this to garner attention and to create a more immersive experience.

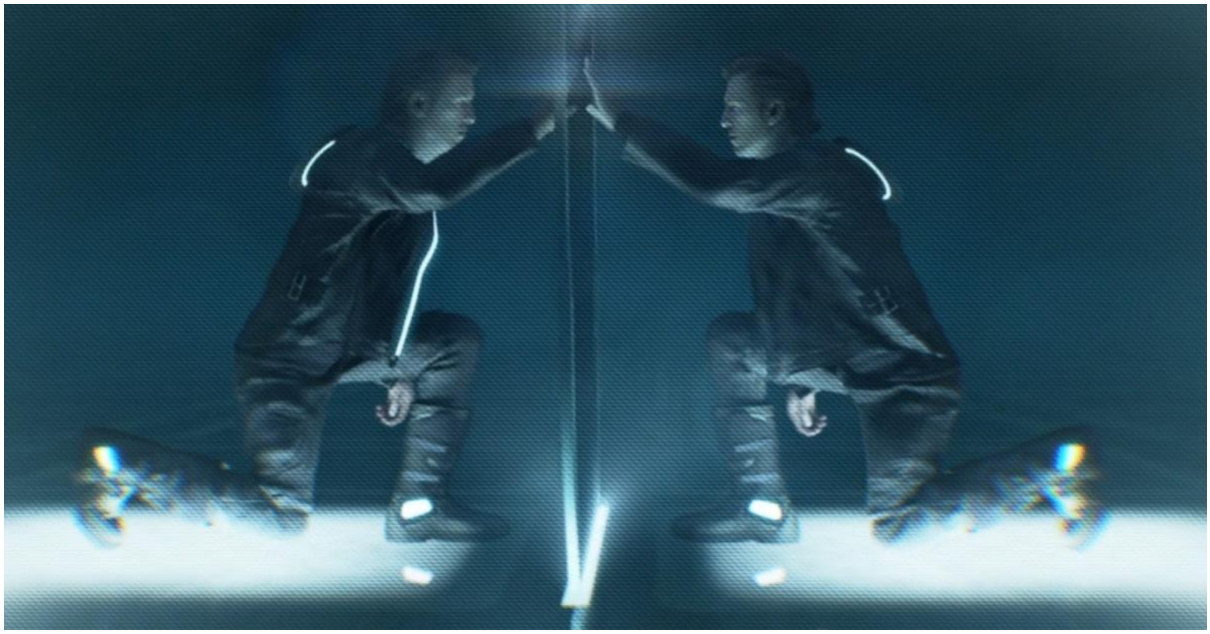

Figure 22: The perfect mirror image when Flynn (left) creates Clu (right), the 'perfect' programme, *Tron: Legacy*. 2010.
Screen shot by author.

Another mirror motif occurs when Clu searches Flynn's lair and picks up a shiny, metal apple, in which he sees his reflection. He becomes enraged after this, perhaps because it is a reminder of his existence as the duplicate. The existence of Quorra, in particular, raises the issue of the copy, something that is represented when she looks at herself in a mirror while at Flynn's safehouse (Figure 23). She was 'birthed' in a digital/virtual reality and is made up of code but is able to leave the Grid and become truly corporeal at the end of the film. Lacan's mirror stage can be used to interpret this scene as it marks the point where Quorra decides to help Kevin with a plan for them all to escape. The scene may also be a remark on the relationship between body and self. Quorra has a body but the question is whether she is a 'self' and has consciousness in the Cartesian sense. There is even a doubled layer of creation in the film, with the filmmakers having made the movie itself, as well as Flynn's own creation of the Grid and of Clu as the subject of the plot.

The mirror motifs and the questions they pose about real vs copy and about the inability to distinguish between boundaries relate to the feedback loops referred to earlier in this chapter, as well as Baudrillard's third order of simulacra, namely simulation. Furthermore, the representation of this non-existent world plays on Baudrillard's (1988:[sp]) fourth stage of simulacra and simulation, when an image "bears no relation to any reality whatever: it is its own pure simulacrum". In *Tron: Legacy* the virtual reality has no bearing on actuality, on real life: It is an imagined reality and this is part of what represents the sublime, which is something ineffable, that stretches the limits of the mind. Ndalianis (2015:159, emphasis added) argues

that in the film there is an “emphasis on the transcendent and the sublime; on the multiple levels of reality that fold into each other *obscuring where one ends and the other begins*”. This obscuring is a blurring or obfuscation of reality through simulacra and simulation.

Figure 23: Quorra (Olivia Wilde) stares at herself in the mirror. *Tron: Legacy*. 2010. Screen shot by author.

Moreover, inanimate programmes, which are really just code and data ‘bunched together’ in a particular way, look like humans and are played by human actors. Because the programmes look human(oid), Sam is mistaken for one when he first enters the Grid. At the same time, the ISOs also look human. This raises several questions for the viewer, including the recurring one of science fiction: What does it mean to be human when *looking* like a human is not enough? Humanoid programmes are still disembodied because they only *represent* characters. However, Wood (2014:34) argues that giving disembodied data human form is problematic because “data as data is replaced, becoming instead a human form readable in terms of humanness”. As the film shows, ‘perfect’ programmes are neither human nor humane. It is only the self-forming strings of data, like the ISOs that display elements of humanity, the imperfections of emotions for example.

While programmes are given human form, the film has to make it clear that there is a distinction between humans and ISOs, as well as other disembodied data. Visually, the lights on the costumes of the Flynns and ISOs are a blueish white, while those of the ‘evil’ programmes and Clu are orange/red. Considering the *mise en scène*, the ISOs arrive from an ‘outland’ where the rigid lines of the rest of the Grid are absent. The ISOs are “examples of a

decentralised process, the spaces between the light lines generating something unexpected" (Wood 2014:38). The ISOs have implications for the way humans view themselves; they represent being awe-struck by science and technologies that are near-incomprehensible, as well as the fear of being supplanted. Sobchack (1987:237) states that humankind has "become increasingly aware of ourselves as 'constructed' and 'replicated' – not only through our abstract knowledge of recombinant DNA, but also through our heightened reflexive experience of using an always acculturated (and, therefore, 'artificial') intelligence, and of being a 'self' always (re)produced and projected as an image available to others". Therefore, within the Grid is a contestation of identity: Between self and other, between the human body and between data. Furthermore, the idea of the simulacrum is recalled in that digital data itself is not truly observable, only its effects are and so, can only be represented: The ones and zeroes of binary code someone can see on a computer screen do not constitute the data itself.

There are also elements of the uncanny in *Tron: Legacy* weaved within the science fiction sublimity such as objects like food and books referred to earlier. But even the setting must resemble something familiar made strange. Wood (2014:37) identifies a familiarity about the Grid, "one that comes into view at an intersection of known cinematic language, a soundscape partly grounded in reality (the sound effects of the light cycles are manipulations of Ducati engines), and data bodies with recognisable patterns". The data lines which resemble city blocks and the programmes that resemble humans are elements of the uncanny, a defamiliarisation of the known.

6.3 *Interstellar* and the space-time continuum

Out of the three case studies, the 2014 film *Interstellar*, directed by Christopher Nolan, most obviously concerns the infinite. Robu (1988:23, emphasis in original) states that "what makes us *think the infinite* in SF is science. In science fiction science *enforces the sublime*". With this case study I aim to illustrate how this may occur. James Koh (2016:43) cites Barry Vacker regarding the two philosophical questions posed by space films:

> Either humans are confronted with 'cosmic nihilism' (dread in the face of realising that there is no meaning to humanity's existence in the universe) or the 'cosmic sublime' (the awe and wonder of a vast universe in which we are physically insignificant)… *Interstellar*'s dialogue directly addresses the possibility of a cold universe, the grandness of its scale, and the relationship between the physical world and human values.

What also makes this SF film rare is that most of it is scientifically accurate, based on the work of well-known and respected theoretical physicist Kip Thorne, who worked as a consultant on

the film in order to ensure the science remained as true as possible especially in its visual depictions.

The film is set in a near-apocalyptic world some undefined decades in the future, in which a blight has resulted in the destruction of most crops, with corn the only food that can still be grown and this too, beginning to fail. Massive dust storms result in many having lung diseases. The film, which was mostly shot with 3D IMAX cameras, opens documentary-style with a number of people who experienced the real-life "Dust Bowl" of the 1930s in the US and Canada[90] recalling these experiences as if they are the events that precede the start of the film. This lends an air of authenticity to the story.

Cooper (Matthew McConaughey) is a farmer but he still hankers after his former career as a test fighter pilot and engineer. But, the world no longer needs explorers and scientists, only those who can work the land to produce food. While Cooper's 15-year-old son, Tom is deemed as good future farming material by his school, 10-year-old Murphy (aka "Murph") with her interest in astronomy is considered a problem by her teachers, for this is a world in which the government tries to impose mind control by insisting all space travel, including the moon landings, were faked to bankrupt the Soviet Union. As mentioned in Chapter Four, a dystopian landscape may include the use of older technologies and this is seen in *Interstellar* in the use of old farm implements and tractors, two-way radios and old vehicles due to the lack of interest in science and new developments. An aspect of the metaphysical enters the film when Murph insists there is a ghost in her room, trying to communicate with her, as books keep falling off her shelf. Her father insists that unless she can scientifically prove this, it must be her imagination. So, she sets off to find 'the message' the ghost is sending. Murph works out that the books fall out in spaces like a code, though her father dismisses this.

The idea of the void in *Interstellar* is first introduced when a dust storm hits the nearby town, engulfing everything in a brown nothingness. This is a precursor to the voids of space and astronomical bodies like wormholes and black holes that are to come later in the film. Following the storm, lines of dust appear in Murph's room and Cooper begins to believe that the lines are made by gravity. He discovers that the lines do not represent Morse code but rather, binary code that translates into coordinates, mistakenly believing the phenomenon of the books and the dust lines have the same cause.

[90] For most of the 1930s, a major drought gripped the Great Plains, the food-basket of the US. Massive dust storms, known as "black blizzards" began to engulf these areas. At one point, nearly 75 percent of the US had been hit by the drought (Dust Bowl 2009).

Cooper and Murph follow the coordinates and discover a secret underground research facility run by NASA. Cooper is interrogated by a strange robot that defies the viewer's expectations of what these normally look like in SF, for Tars is a block-like machine with no humanoid visual features, though his voice sounds distinctly human and he has a sense of humour programmed into him. This elicits feelings of the uncanny, of something strange and a little disquieting. Nolan (Warner Bros & Paramount Pictures 2014:16) stated he wanted a very minimalist approach to the robots, inspired by architect Mies van der Rohe. Tars' interrogation of Cooper is interrupted by a woman, Dr Amelia Brand (Anne Hathaway), who takes Cooper to a boardroom full of scientists. The group reveals that despite beliefs to the contrary, NASA has continued its work – "the best-kept secret in the world" (Nolan 2014). Cooper is taken on a tour of the facility, where people work on a spaceship.

The head of the team, Amelia's father Professor Brand (Michael Caine), explains that the oxygen in the Earth's atmosphere is increasing, meaning Murph's generation will be the world's last and they will either starve or suffocate to death. Brand then reveals that there is one last spaceship available, the Endurance, which cannot take all people into space and to safety, but is part of a plan to save the world. The shots of the space shuttle are low, creating a sense of scale, grandeur and awe of the craft in the 3D IMAX cinema (Figure 24). It is the beginning of the sense of wonder at the cosmos and the infinite that permeates most of the film.

Professor Brand explains that a previous ship, the Lazarus, left for a mission a decade prior, seeking other habitable planets. This was after gravitational anomalies were detected 50 years before, leading to the discovery of a disturbance in space-time near Saturn, which turned out to be a wormhole. The wormhole leads to another galaxy, which is where the Lazarus was headed, to visit 12 possibly liveable planets. The wormhole, which is not a naturally-occurring phenomenon, was placed there by a group the scientists refer to as "them" and "they", somebody or something possibly hoping to save humanity by allowing them to travel to distant places that would not have been possible otherwise. The wormhole represents a form of scientific time travel, a concept that may be completely baffling yet awesome to non-scientists and hence, when used in fiction, is an evocation of the science fiction sublime.

Figure 24: A low shot that tilts upwards creates a sense of grandeur and anticipates later space travel, *Interstellar*. 2014.
Screen shot by author.

Professor Brand, in trying to convince Cooper to pilot the Endurance, explains that there are two plans to ensure a viable number of people will be able to populate a new planet. Plan A is a massive space station that will allow everyone to leave Earth for the new home. However, doing so remains a problem due to the law of gravity, something Brand says he is close to solving. Plan B is a "population bomb" using 5,000 fertilised eggs, some of which would first be incubated, with the rest reared through surrogacy. Cooper is upset that Plan B would leave everyone on Earth to die, but the Professor assures him he is certain he can solve the gravity issue by the time Cooper returns to Earth. The film posits a big contrast between two worlds: The technophobic world in which Cooper lives and the technophilic, secret one of NASA, favouring the idea of exploration as a way of saving humanity.

When Murph finds out that Cooper has agreed to the mission, she is furious. She believes she has solved the code of the books through Morse code which has a simple message: "Stay". Cooper promises he will return and gives Murph his watch. He explains that time runs more slowly in space[91] and that by the time he is back, he and his daughter might be the same age, another scientific principle that seems mind-bending and therefore, a representation of the SF sublime. Murph realises Cooper does not know when he will return and she refuses to say goodbye or see him off.

[91] This is due to the Special Theory of Relativity which states that "the faster someone moves, the more their time slows down" (Chown 2007:132).

When the rocket is launched, high-definition shots of Earth contrast with the void of space (Figure 25). Most shots outside the rocket are accompanied by complete silence (a device repeated often in the film) which contrasts with the deafening noise of the blast-off. When the craft reaches the Endurance, motion in 3D is used to create a sense of the massive size of the ship along with a sense of vertigo, as well as a sense of depth and of being in space. This relates to the stereoscopic images (referred to in Chapter Five) that are almost tactile, causing a disruption of disembodied viewing. Thomas Cochrane (2012:129), in describing the emotional experience of the sublime, states that "it involves a sense of self-negation; that perceiving the object makes us feel reduced or overwhelmed". *Interstellar* does this both in the way in which it overwhelms the viewer with a feeling of unbounded magnitude like the infinity of space, and in the way it makes the viewer feel utterly insignificant in how small humans are in relation to the cosmos.

Figure 25: The small Endurance leaves behind the known for the unknown, *Interstellar*. 2014. Screen shot by author.

Classical music plays in the background as the ship spins around, reminiscent of the docking sequence in *2001.*[92] Then, there is complete silence again, an articulation of the lack of sound in space, emphasising the idea of the void. Nolan (Warner Bros & Paramount Pictures 2014:24) wanted to create a sense of claustrophobia: "Every time you cut to these silences, there is a feeling of all the air going out of the room. It's a continual reminder that outside these

[92] Nolan has admitted that he was inspired by *2001: A Space Odyssey* both thematically and visually (Jenson 2014:25).

metal walls is a hostile alien environment, and if anything goes wrong, it's instant death". The ship spins in blackness, with almost no stars to be seen. In 3D, it feels as if the viewer is floating in the void, spinning with the ship as the blackness slowly comes closer to the screen. It is again a terrifying yet marvellous abyss.

Minutes later, parts of the ship can be seen spinning against a backdrop of Earth. It is disorienting, as space travel would be. An extreme long shot shows a tiny spacecraft as it heads further into the void, a blimp compared to the massive size of Earth and even smaller in the infinity of space. The scale used in this shot evokes the mathematical sublime, of that which is great beyond comparison and of that which is too big to comprehend. There is a sense of "inadequacy" as Kant describes it, an awareness of lack and of the limits of humanity. The depth-of-field created by watching the film in 3D on an IMAX screen makes the viewer feel as if they are being drawn into the void along with the ship.

While the interior of the spacecraft is like many others in SF: White with plenty of chrome-like surfaces, the Endurance shows wear-and-tear, again a reference to the use of older technology in apocalypse (or near-apocalypse) settings. The crew members prepare to put themselves into stasis and a conversation between Amelia Brand and Cooper reflect the dynamical sublime. While space in its magnitude is mostly considered as part of the mathematical sublime, the exchange sees the planets they hope to discover as part of nature. "That's what I love – out there we face great odds. Death. But not evil," Brand says. "Nature can't be evil?" Cooper asks. "Formidable, frightening – not evil. Is a tiger evil because it rips a gazelle to pieces?" she replies. As Cooper sends his last message to his children before the "long nap", the Endurance is seen receding into the black void with almost no stars visible, becoming no more than a speck. This relates to what Frost (2011:[sp]) calls the "removal of one visual experience and the substitution of another via a colour [in this case, black] that cannot be seen, an embodiment through absence, a colour of nothingness". It is in this nothingness, the liminal space, that the science fiction sublime occurs.

Furthermore, the terror necessary to the sublime, which is represented by the void, is expressed by the scientist Romilly (David Gyasi) when the crew wakes up near Saturn: "This gets to me, Cooper. This, millimetres of aluminium, that's it and then nothing out there for millions of miles that won't kill us in seconds". Morley (2010b:12) states that the sublime is an experience that is "fundamentally transformative, about the relationship between disorder and order, and the disruption of the stable coordinates of time and space". The disruption in *Interstellar* is represented by the wormhole and the black hole. As the crew heads for the wormhole, Romilly gives a scientifically-accurate explanation of how it works. Unlike many

other objects in SF, the wormhole is no novum; it is all the more terrifying for being something real but which has not been seen before; it is indescribable, unfathomable yet it exists. The sphere of the wormhole at first looks like a bubble (Figure 26). As the spaceship enters there is a feeling of the vertiginous as things rush past and the ship begins to shake. It is as if the wormhole is bending and the viewer with it, like being in a spherical lightning storm. Then, silence again.

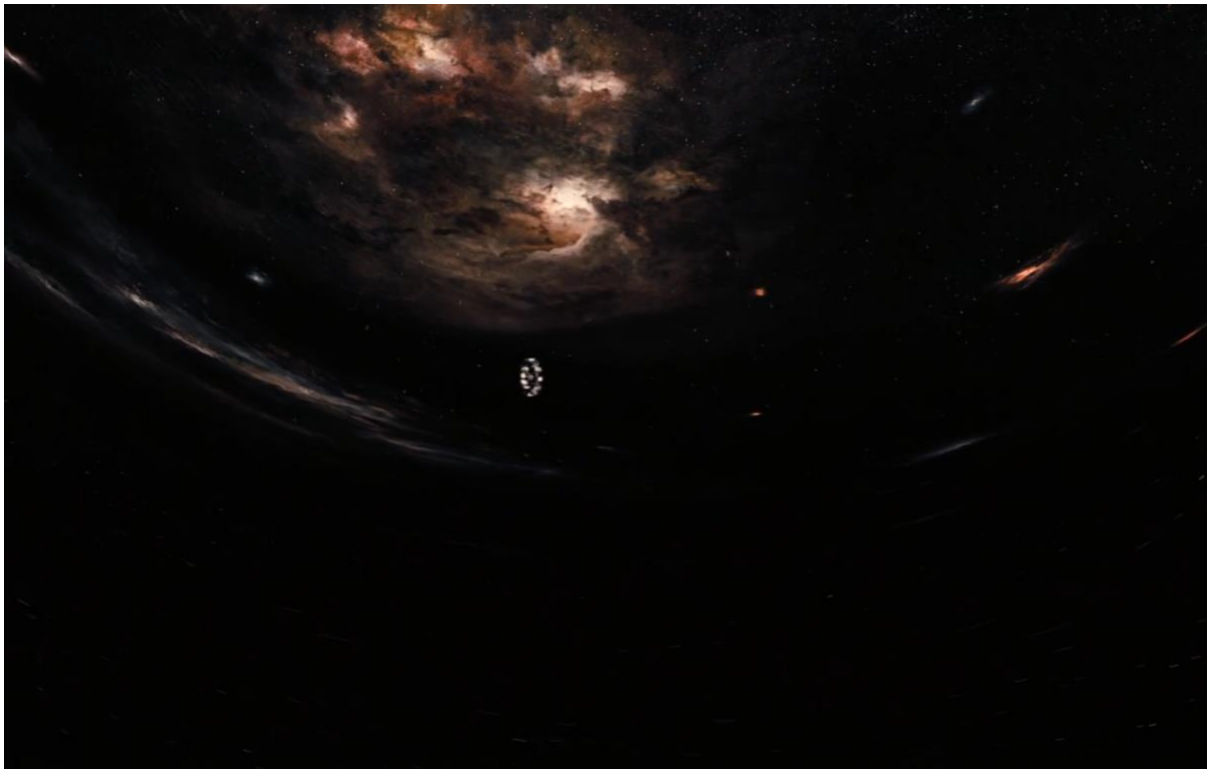

Figure 26: A minute Endurance heading into the wormhole, *Interstellar*. 2014.
Screen shot by author.

One of the first troubles the crew runs into is that one of the planets they must visit has a black hole[93] near it, which will slow down time drastically compared to Earth because of the gravitational pull. One hour on the planet will equal seven years on Earth, and Cooper begins to panic at the lost time. He devises a plan that will prevent them from being drawn into the aptly-named Gargantua, the ultimate abyss which swallows everything but from which nothing can escape. The viewer once again feels like they are pulled in by the screen, by the black hole, which appears to bend light, the collapsed star visible inside, “a literal heart of darkness” as one of the other crew members describes it.

[93] A black hole forms following the collapse of a star. Its gravitational pull is so strong that not even light can escape it (Chown 2007:115). While there is no matter inside black holes, they have a surface called “event horizons” or “horizons” (Kip Thorne 2014:[sp]).

When the spaceship's Ranger (a smaller, exploratory craft) lands on a vast ocean, after having spiralled down to the planet at breakneck speed, it is mere minutes before one of the crew members dies after massive waves, bigger than multiple tsunamis begin to break. The height and sheer immensity of the waves on an IMAX screen appear colossal as if about to drown the viewer. This relates to the science fiction sublime, in which a viewer experiences the sublime due to being at a safe distance from danger caused by objects of nature. The ship is swept off course and instead of losing seven years, the crew loses 23. Cooper, in denial, figures if time is relative, they should be able to make up for it but as Dr Brand explains, while time may be stretched and squeezed, it cannot run backwards: "The only thing that can move across dimensions like time is gravity". Even if there are beings communicating with them from the future, she explains, these creatures are likely five-dimensional because for them time poses no such difficulties.

By the time the crew returns to the Endurance, Cooper's children are grown. Tom (Casey Affleck) has children of his own and after sending dozens of messages over the years, decides that he will no longer be transmitting any as his father has never responded and is likely dead. There is only one message from a furious and tearful adult Murph (Jessica Chastain) on her fortieth birthday, the age Cooper was when he left. She is now working at NASA where the gravity problem has still not been solved. Following this, Brand and Cooper have a discussion about love, with Brand stating that it is observable: "Love is the one thing we're capable of perceiving that transcends dimensions of time and space", a comment that sounds comparable to the sublime if only for its ability to eclipse all else. On Earth, meanwhile, the apocalypse draws near. More crops are being lost and Tom's son, Cooper Jr has a major lung disease. A dying Professor Brand reveals to Murph that Plan A was never going to work, but before he can answer her question about whether her father knew this, he is gone.

The next planet the crew lands on appears to be an icy wasteland (filmed on location in Iceland). There, Dr Mann (Matt Damon) lies to the Endurance crew, saying while his world is unliveable in the mountains, the valleys are habitable with fresh water and breathable air. The cold, stark and unforgiving landscape with its crevasses again evoke sublimity (Figure 27), and during fog and snow, it becomes like a white void, a near-blank canvass akin to absence. Both this planet and the previous planet use defamiliarisation to make the recognisable new through ostranenie: A recognisable ocean but one that is monstrous and a stark, hostile world of ice and rock that appears alien. Cooper is furious when he sees a message from Murph to Dr Brand that her father has died and hears her accusation regarding Plan A. Dr Mann confirms that Professor Brand had long solved the gravity problem but could not reconcile relativity with quantum mechanics as he would need to know what was inside a black hole,

something that is impossible because whatever is inside, at its centre, is always hidden. When Mann reveals to Cooper he lied about the planet being habitable in order to be rescued, he tries to murder Cooper, he kills Romilly and steals a Ranger hoping to take control of the Endurance. Cooper survives and he, Brand and the two robots race after Mann, who dies while inadvertently destroying part of the Endurance during docking.

Figure 27: The stark, icy landscape of Dr Mann's planet, with its white skies, crevasses and fogs, recalls the sublime, *Interstellar*. 2014.
Screen shot by author.

Cooper realises there is not enough fuel to get them to the third and final planet and so "slingshots" the ship around the black hole, but in the process, they lose another 51 years. Cooper decides it is best if Brand and the robot Case go on to the third planet while he and Tars enter the black hole in order to send back the data to Earth to solve the gravity equation. The black hole is the ultimate void as nothing escapes it and no one can say for sure what is inside, what the singularity[94] is. It is, as is known to humans, like an absence, what Taylor (1992:29) describes as the "absence of ground [which] is the absolute desertion that is the desertion of the Absolute". Cooper and Tars separately enter the frightening abyss, whose edges at first appear like molten lava. Because a black hole has never scientifically, with these kinds of visuals been depicted on screen, it is a completely new and daunting experience for the viewer. "Heading towards blackness. It's all black," Cooper narrates.

[94] The singularity of a black hole is "a tiny region where the surface forms a point and thus is 'infinitely warped,' and where, it turns out, tidal gravitational forces are infinitely strong, so matter as we know it gets stretched and squeezed out of existence" (Thorne 2014:[sp]).

This void also relates to Taylor's (1992:305) view mentioned earlier in the study, regarding the terror inspired by absence. Cooper loses contact with Tars and is utterly alone as he heads further into the black hole. He moves through a cloud of white 'dust' while flashes of light can be seen in the blackness. 'Sparks' begin to fly at the audience (Figure 28), as viewers experience feelings of becoming disembodied through being pulled towards the screen and into the black hole. The ship catches fire and Cooper ejects himself into the silent darkness with only his shivering breath audible. He is pulled towards a light, perhaps the singularity, and is then falling through something that looks like a shoot. When he stops falling he finds himself inside a tesseract,[95] filled with lines that appear to be moving (Figure 29).

Figure 28: White 'dust' and 'sparks' fly towards the viewer, all that pierces the terrifying black void, *Interstellar*. 2014.
Screen shot by author.

Cooper figures out the lines are bookshelves. When he punches the books in, he sees Murph as a young child on the other side. He tries to call her but the 'gap' between them is too big. In order to gain her attention, he punches the books out in a code formation thereby becoming the 'ghost' Murph believed was communicating with her as a young child. There are cuts to various things that happen in the past, for example, when Cooper tells Murph he is leaving. It was Cooper who sent the message "Stay" in Morse Code. Kelly (2002:[sp]) writes that

> computation seems almost a theological process. It takes as its fodder the primeval choice between yes or no, the fundamental state of 1 or 0. After

[95] A tesseract is also known as a hypercube or "a cube in four space dimensions" (Thorne 2014:[sp]).

> stripping away all externalities, all material embellishments, what remains is the purest state of existence: here/not here. Am/not am. In the Old Testament, when Moses asks the Creator, "Who are you?" the being says, in effect, "Am." One bit. One almighty bit. Yes. One. Exist. It is the simplest statement possible.

By using code, like the ones and zeroes of binary code or the short and long sequences of Morse Code, there is once against an oscillation between opposites across a gap, the gap through which the SF sublime can also be evoked. The “here/not here” described by Kelly also recalls the absence referred to by Taylor, as well as the descriptions of transcendence in immanence by Sobchack. The roots of the idea of transcendence lie in religion as described in Chapter Three and in SF, science has supplanted that, becoming that in which people have faith. As Jeffrey Kluger (2014:44) argues, science “addresses many of the same questions religion does: Why are we here? How did it all begin? What comes next? And even if you can barely understand the answers when you get them, well, you’ve heard of a thing called faith, right?”

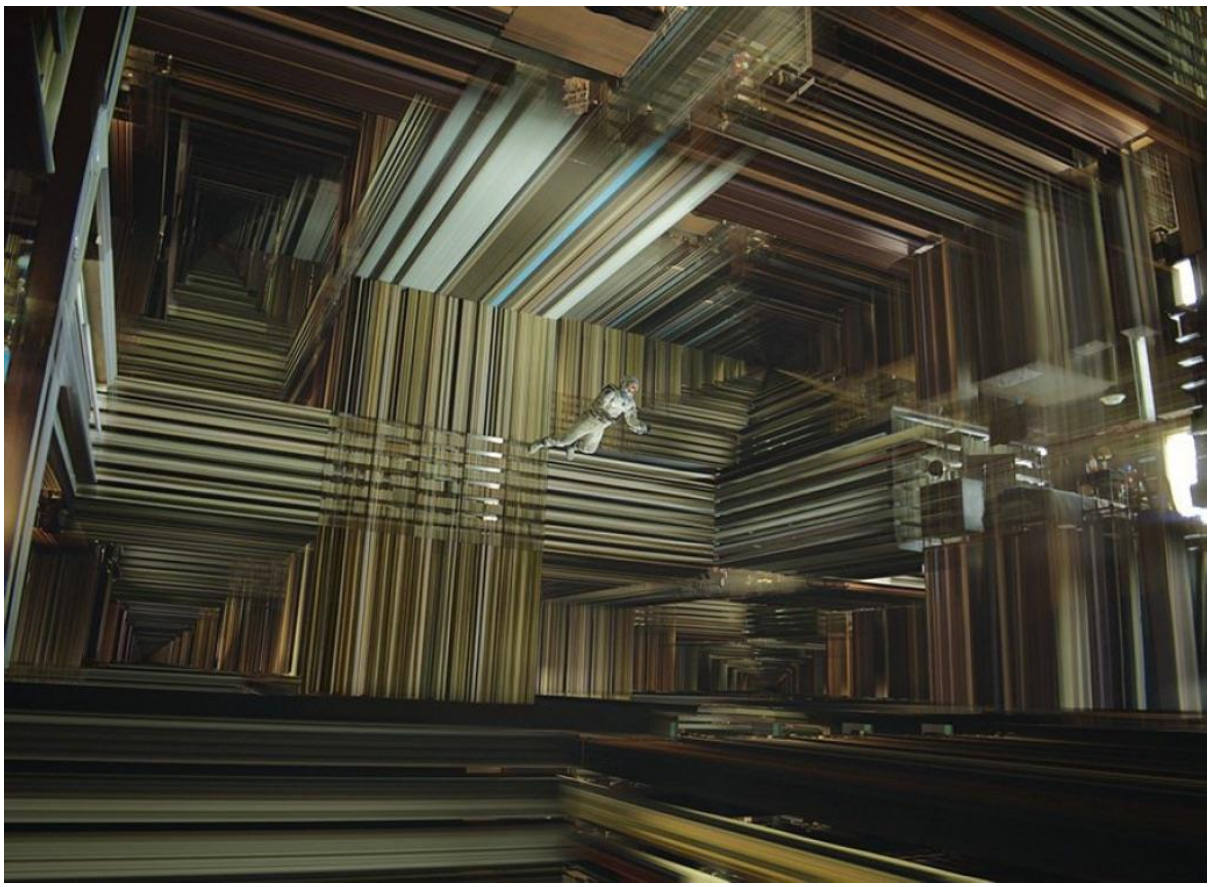

Figure 29: Cooper finds himself inside a four-dimensional tesseract, *Interstellar*. 2014. (Tesseract from *Interstellar* film wiki website).

At the same time on Earth, Murphy has returned to her childhood room where she re-examines the bookshelf and her old notebook in which she had been deciphering the code of the ‘ghost’

years ago. She begins to remove the books the way they had been when the 'ghost' was communicating with her. In the tesseract, Cooper weeps as he presents the message he ignored at the time. This also presents a paradox because even though the message is delivered in the past, he dismisses it and does not stay. The question is posed: What would happen if he had listened to the message? However, his attempts to change the past are futile. In the present, Murphy figures out her father was trying to communicate with her across time. The library becomes an interstitial space: One on Earth in a three-dimensional world, and one in the tesseract, a five-dimensional world. Patrycja Podgajna (2016:55) states that "by projecting time as a physical dimension, Nolan's film not only violates human perception of time as a linear concept, but it also visualises multiple permutations of past, present, and future all happening along the same time axis. Intratextually this temporal paradox enables the spatial reunion of the temporally detached… [exacerbating] the ontological instability and plurality of the represented world(s)". This violation of the perception of time, just like the black hole and wormhole, confound understanding, creating the awe of the science fiction sublime.

Tars and Cooper find each other in the tesseract and figure out that the unknown beings are what saved them. Cooper realises that if he can exert a force across space-time, he can use gravity to send a message across dimensions, including time, to help Murph solve the gravity equation, a kind of *deus ex machina*. Cooper looks around an infinite tunnel with infinite Coopers and realises that those who helped them are humans from the future, people who have access to infinite time and space in any direction. The beams begin to change and Cooper is enveloped in a white light that results in a completely white screen, another absence. He falls through time and wakes up in a hospital, more than 50 years in the future at the age of 124, barely looking older than 40. He is on the space station. The gravity equation was solved and humanity was saved. Cooper has an emotional reunion with Murph, now aged and dying. She tells him to head back out into space to find Brand and help her set up a colony.

Beatrice J Choi (2015:93) states that the

> simulation of the fifth dimension takes on the spectacular form of the familiar, extracting scientific epiphany from overlapping montages of Cooper's daughter moving, thinking, and growing in her bedroom. This implies that, for survival, man requires both the formal calculation that science provides to make sense of phenomenon beyond bodily limits as well as an openness to individualisation, of a person's defined interiority to orient perceptions.

Therefore, not only is transcendence in immanence evoked by the effects of the film, it is represented by science, by what happens inside the tesseract which stands in for the

“phenomenon beyond bodily limits” (transcendence) while at the same time concerning the subject’s (Cooper’s) “interiority” (immanence).

Hence, the film evokes the science fiction sublime in multiple ways, with elements of both the mathematical and dynamical sublime, the special effects sublime, as well as the contemporary and cinematic sublime. The time travel narrative with the aid of special effects, confound the laws of nature that are too great to comprehend. There is an “inner perception of inadequacy” of the imagination (Kant [1790] 1914:§27). Yet the mind will attempt to comprehend that which is bewildering and astonishing through Reason, transcending the impossibility of understanding concepts like the relativity of time and infinity. The science of *Interstellar* itself is confounding. Based on the theory of relativity and quantum mechanics (the latter of which many scientists joke no one, including themselves, understands), binary opposites are posed. Kelly (2002:[sp]) states that

> a quantum-level particle's existence [is described] as a continuous field of probabilities, which seems to blur the sharp distinction of is/isn't. Yet this uncertainty resolves as soon as information makes a difference (as in, as soon as it's measured). At that moment, all other possibilities collapse to leave only the single yes/no state. Indeed, the very term ‘quantum’ suggests an indefinite realm constantly resolving into discrete increments, precise yes/no states.

If applied to the science fiction sublime, the indefinite realm described above recalls blurred boundaries and a void, on either side of which are two states: Immanence and transcendence. It is because of the blurring of the void that transcendence in immanence can take place.

Furthermore, *Interstellar*, like many other science fiction films, uses inspiring and terror-inducing scenes of nature to evoke the SF sublime. Jensen (2014:26) states Nolan “wanted to play with scale and pit man against monolithic nature. Dust storms. Tidal waves [and the winter landscape]”. Bignell (2004:140) describes the attempt to overcome the sense of danger presented by objects of nature in cinema as a “transcendent vision, where the cinema spectator seems to master and control what is seen on the screen, while being excluded from the action and removed from responsibility for it”. This transcendent vision mirrors the science fiction sublime: The spectator in the cinema, like the spectator in nature, experiences terror invoked by the strange and frightening landscapes, but is ‘protected’ from it by experiencing the danger from a distance, in the case of the cinema, the protection is via the screen, in the distance between the subject (viewer) and the object.

However, the distance can be overcome through an exchange between the embodiment of the spectator in the here and now of the cinema (immanence), and the feeling of being enveloped in the special effects, the ‘out there’ or disembodied experience (transcendence).

Films like *Interstellar* conflate time and space. Such films are "nostalgic for wide open space… [without] urban clutter… [that look] for an open and dark terrestrial sky that can serve as an empty screen, a clean slate, for some new and marvellous and somehow 'natural' (if still 'technological') display" (Sobchack 1987:266). This relates to the awe-struck wonder of the technological sublime found in special effects and the cinema. Yet the absence found in the void is terrifying, even experienced at a distance. Jean-Luc Nancy (quoted in Taylor 1992:269) states that the subject's experience of the divine, i.e. transcendence, is an experience of desertion.

There is also an attempt to try to 'touch' the audience through hyper-haptic 3D imagery. Co-screenwriter Jonathan Nolan (Warner Bros & Paramount Pictures 2014:3) referred to the sense of wonder inspired by the vastness of space: "the effort was to try to take a big idea and ground it as much as possible to give you a real sense for what interstellar space travel would feel like, not only as a tactile experience, but in terms of the emotional toll such a treacherous and isolating journey would have on human beings". In terms of the special effects, Christopher Nolan (Warner Bros & Paramount Pictures 2014:4) said his focus was "to try and put the audience into space; to put them into the shoes of the astronauts who are exploring these new worlds and new galaxies; [so] that the audience will get a sense of the spectacle of a great interstellar journey". Nolan wanted the imagery to be so powerful that the audience would be *directly* affected by it instead of watching the reactions of the characters. It can also be proven how viewers react to films that evoke the sublime. Using eye-tracking technology to research how viewers' eyes move during such films, Redmond (2016a:38) describes how overwhelming scenes like the ones in *Interstellar* can be: "One can be asked to look 'everywhere' in a scene of spectacle, its technological, natural or violent and chaotic splendour not really pointing anywhere, not analytically directing the gaze, but instead asking the viewer to experience it first and foremost as a(n) (in)sight of awesomeness".

Part of the affective nature of the effects in *Interstellar* was created through the verisimilitude. The starscapes, for example, were made up of the myriad photos taken by NASA and the Hubble telescope. Cinematographer Hoyte van Hoytema combined "the intimacy and immediacy of documentary-style handheld filmmaking with the beauty and texture he felt was only possible with large-format IMAX film" (Warner Bros & Paramount Pictures 2014:10). Nolan also wanted to use as little CGI as possible, and, for example, images of stars were placed outside the 'windows' of the specially-built spacecraft so that it would look to the actors as if they were really moving through space.

With these three case studies, I have proposed that elements of a number of iterations of the sublime appear in science fiction film. However, it is mostly the transcendence in immanence that is present in these films that form the science fiction sublime. Some special effects serve to create a feeling of the viewer being taken out of their seat and into the screen (transcendence), while at the same time other effects remind the viewer of their material condition, their corporeality (immanence). This paradoxical experience of transcendence in immanence is because “we not only feel, but we feel ourselves feeling”; there is a “conundrum of scientific figuration and sensual intelligibility” (Sobchack 2008:198). The various themes, alienation/the alien other, technophobia/technophilia, and infinity, also represent various elements of the sublime.

CHAPTER SEVEN: CONCLUSION

This study has sought to investigate the relationship between the genre of science fiction and the philosophy of the sublime, from Classical until recent times. Furthermore, the study has indicated how various iterations of the sublime, including Burke, Kant, the technological sublime, the cinematic sublime, the uncanny and the contemporary sublime are evoked in science fiction, particularly science fiction film, which in turn evokes the science fiction sublime. The discussion also places emphasis on how the science fiction sublime is represented through particular themes in the narrative of the film.

7.1 Summary of chapters

Chapter One outlines the need for a discussion on how the sublime as a philosophy and theory is a fitting lens with which to analyse science fiction, particularly science fiction film. It outlines the research question and aim of the study, namely an examination of how the concept of the sublime, and the genre and medium of SF film intersect in noticeable and meaningful ways. The chapter also examines the literature used as research in the study, which consists of several spheres, including the history of the sublime, the history of science fiction, the intersection between the sublime and science fiction, particularly special effects in film, and research done on the three films studied. The research methodology used is set out, which is qualitative using various theoretical frameworks. Finally, the chapter provides an outline of the chapters to follow.

Chapter Two introduces the reader to the origins of the sublime, from Classical antiquity to its popularisation by Edmund Burke and Immanuel Kant in the eighteenth century, during the Enlightenment period. The chapter closely examines both Burke's argument for an empirical sublime, contrasted by Kant's transcendental sublime, based on Reason. Both Burke and Kant mention terror evoked by nature in their expositions on the sublime, but Kant does not locate the sublime in an object of nature itself, but rather considers the effect of the object in what he terms the dynamical sublime. Kant also claims the sublime may be evoked by concepts that are difficult to grasp such as infinity, in what he labels the mathematical sublime. Both Burke and Kant agree that the subject who experiences terror invoked by the sublime must be at a distance from the object that inspires said terror. The chapter also aims to provide a comprehensive (but by no means exhaustive) analysis of the so-called 'golden era' of the sublime.

Chapter Three further delineates other recurrences of the sublime that followed the Enlightenment. The first is the American technological sublime that occurred following the Industrial Revolution and large-scale immigration to North America. Admiration for and terror invoked by phenomena in nature were replaced by awe-struck wonder at objects created by humans, such as the steam train, bridges and electricity. This preceded a more contemporary reading of the technological and then digital sublime, both of which consider awe caused by concepts like cyberspace and virtual reality, as well as scientific concepts like quantum physics. The contemporary and cinematic sublimes are examined, followed by a look at the feminine/material sublime, which subverts Kant's statements that create boundaries and his belief that women are not able to access the sublime.

Chapter Four provides a brief history of the emergence of the science fiction genre in both literature and film. It aims to give the reader an understanding of the genre, including the ambivalence various critics have regarding its value. Some have argued that SF is puerile and unworthy of close examination, while others have issued claims that it is the only genre that closely examines humans' most demanding concerns about both the present and future. The discussion specifically places the spotlight on the icons/visual tropes present in science fiction and takes a closer look at SF film's kinship with special effects. This leads into the next chapter which focuses on how science fiction film and the sublime converge.

Chapter Five examines how science fiction film elicits elements of various iterations of the sublime to form the SF sublime. The chapter begins with a discussion on the science fiction sublime, that is, how the sublime is evoked in science fiction film, diegetically, through special effects. The discourse then turns to how the SF sublime is represented, non-diegetically, through the themes contained in the film's narrative. Three themes, namely, alienation and the alien Other, technophilia/technophobia, and infinity along the space-time continuum are identified and discussed, preceding an analysis of specific examples of these themes. This chapter lays the foundation for why SF film provides the infrastructure that may be used in the discourse of the sublime. As Csicsery-Ronay (2008:6-7) states:

> Of all contemporary genres, sf is the one most expected to evoke the experience of the sublime. The subject matter of sf necessarily involves the elements of the classical Kantian sublime: the sense of temporal and spatial infinitude of the mathematical, and the sense of overwhelming physical power of the dynamic sublime. Beyond this, it also invokes the historical mutation that David E Nye has named the American technological sublime: the sense of access to, and control of, the powers of nature that typified the American populace's responses to the monumental engineering projects of the nineteenth century. The sense of the sublime most characteristic of post–World War II sf is the technoscientific sublime, which entails a sense of awe and dread in response to human technological projects that exceed the power of their human creators.

Chapter Six is concerned with the analysis of three films to illustrate both how the sublime is evoked in SF film, as well as how it is represented through the themes discussed in the previous chapter. Again, while elements of various versions of the sublime are present in all three films, it is Vivian Sobchack's transcendence in immanence of the cinematic sublime and Simon Morley's immanent transcendence that best describe the evocation of the SF sublime. *Under the Skin* is used as an example of how the void and lack of sound may contribute to feelings of the uncanny but also the oscillation between immanence and transcendence. The film is also used to illustrate the theme of alienation/the alien Other. The abundance of spectacular visual effects in *Tron: Legacy* is used as an instance of the sublime in special effects and again, the impact the latter has on the relationship between feelings of immanence and transcendence in the viewer is explored. The film is also used to illustrate how the sublime is represented in the theme of technophilia and technophobia. *Interstellar* is the final example of how transcendence in immanence is present in SF film, and the presentation of the SF sublime in the theme of infinity is discussed.

7.2 Contribution and limitations of study, and suggestions for further research

The study's contribution can be found in a number of areas. Firstly, the study has added to the limited but growing canon of research on how science fiction film evokes the sublime, in what I call, the science fiction (film) sublime. While there have been previous links between SF film and the sublime, this study specifically has considered how there is a double inscription or articulation of the sublime in SF film, that is, how the sublime is *evoked* through the special effects, diegetically, and how the sublime is represented thematically, non-diegetically. This then becomes the science fiction sublime. Furthermore, the study has considered more recent examples of SF films to illustrate the argument than most other studies, which tend to focus on older films.

The limitations of the study also form the basis for suggestions for further research. Due to the length and scope imposed on the research study, only three themes and films could be analysed. There are a number of other themes present in science fiction film like the fear of the future included in disaster films and alternate histories; and the loss of bodily autonomy such as presented in stories about futuristic robots and AIs, bodily mutations, the downloading of the mind/conscious, and alien bodily takeovers. Other recent films that proved pertinent to the research question had to be ignored due to the limited scope. One such film is the critically-acclaimed *Arrival*, mentioned earlier in the study, in which 12 alien spacecraft land in various places across Earth. A linguist is hired by the military to try and establish communication with the creatures. The film explores the theme of alienation (how the aliens themselves mirror the

isolation of the lead characters) and explores the storyline of the alien invasion. Another example of a recent film that could warrant further examination is *Ex Machina*, which explores the fading delineation between humans and machines. In the film, a scientist creates a breathing Artificial Intelligence. A programmer is then employed to assess whether the AI is humanoid enough to pass muster. The film is an example of the theme of technophilia/technophobia. A film that explores the concept of infinity in space is *Gravity*, also mentioned earlier in the study. Most of the film takes place in space, with special effects used to create a sense of the vast expanse.

Therefore, it could prove worthwhile to look at some of the other recent science fiction films that were mentioned briefly during the course of the study. For example, it may be interesting to do a comparison between the way the sublime is evoked in low-budget SF films and blockbusters, or between British and American films, or between Western and Asian science fiction films. Approaches between geographical areas differ and it would be worth examining whether the sublime, a Western construct, is found equally (through various elements) in films originating in different parts of the world. Morley (2010b:18) suggests, for example, that the psychological experience "within the force-field of the sublime" could be considered, or asking "what might the social and political consequences of this experience be?"

Moreover, a closer examination of other sub-categories of the sublime, mostly as concerned with ideologies, can be undertaken including gender (the feminine sublime), Marxism/class, race, sexuality, as well as frameworks that consider historical contexts like modernism and post modernism. Further explorations of science fiction's intertextuality and its possible impact on the evocation of the sublime may be warranted.

7.3 Concluding remarks

I realise there is a certain kind of irony in trying to describe the indescribable, as well as in using elements of science to discuss a concept, the sublime, which is not scientifically verifiable. Furthermore, as Morley (2010b:19) states, the "discourse of the sublime is… tainted by both malevolent politics [the invocation of the sublime by the Nazi regime] and inauthentic mass culture", of which films form a part. However, Morley (2010b:18) admits that the sublime in contemporary times no longer strives for the lofty moment in which there is "a higher and essential reality", but rather for a transformative experience, something affective, and something which I argue may be achievable in the science fiction sublime, however fleeting.

I have attempted to show that the characterisation of the sublime has changed over several centuries as times have changed. It is a mutable concept in philosophy and perhaps it is near-futile to try and pin down a definition. Gene Ray (in White & Pajaczkowksa 2009:132) states the sublime should be considered as "'a category in motion, as a process that unfolds within changing social conditions and therefore changes along with those conditions. We need to resist the tendency to assumed that the sublime is a feeling or experience that remains constant over centuries…'". It is perhaps the mysterious nature of the sublime – the inability to truly express how the subject feels when overwhelmed by the sublime, as well as the impossibility to represent it in art definitively – that makes it an enticing topic to explore.

Admittedly, it was often a frustrating exercise trying to both analyse and understand the mercurial nature of the sublime, until the realisation dawned that perhaps the best way to study the sublime is not to try and define it, but rather to study its effects and the impact it has on art, that mirror which reflects our lives and feelings. That is why the study of certain texts, like science fiction films, help bridge the gap that characterises certain experiences of the sublime, and which has been referred to multiple times in this study.

However, it is possible to draw some inferences from a close examination of the sublime in a contemporary setting, particularly as evoked and represented by certain texts. Instead of asking: "What is the sublime?" the question should be: "Where does the sublime emerge?" and "What effect does it have on the subject?" From this study, I want to make a number of suppositions that may be explored in further studies.

Firstly, the sublime may be something that is so overwhelming that there is a loss of a sense of self. When the subject is in a cinema, the loss of self occurs through transcendence. But, there is also an affirmation of self, which occurs in immanence as posited by Sobchack's transcendence in immanence. The loss is represented in various SF films. Carlos Clarens (in Sobchack 1987:123, emphasis added) argues that the dehumanisation in SF film "'hits the most exposed nerve of contemporary society: collective anxiety about the loss of individual identity, *subliminal* mind-bending, or downright scientific/political brainwashing'". The affirmation of self also happens in what Sobchack (1987:237) describes as an increasing "awareness of ourselves as 'constructed' and 'replicated'… of being a 'self' always (re)produced and projected as an image available to others".

Furthermore, the very unspeakable nature of the sublime itself evokes the concept of infinity, so closely aligned with eliciting the sublime. The ineffable, Pence (2004:42) argues, maybe be conceived of as "infinite and unbounded. It represents alterity per se, that which one is not,

what one does not know…". The alterity or otherness Pence refers to, when placed next to the self, represents a gap. The sublime, like science fiction, makes us question ourselves, our present and our future, which is why the SF genre is such a salient framework or lens through which to view the sublime in contemporary times. Suvin (in Sawyer 2015:91, emphasis in original) argues that science fiction is about "the 'cognitive estrangement' whereby the experience of a (fictional) imaginative environment alternative to the actual environment of author or reader causes readers to reflect *critically* upon their world".

Secondly, the sublime may act as a bridge across the gap that is referred to by both Morley and Žižek in Chapter Three. In the gap between subject and object, between the self and other, between the viewer and the screen, between the real and the virtual, between safety and danger there is a void, a terrifying nothingness. This recalls one of the poet TS Eliot's (1888-1965) most famous poems, "The Hollow Men", from 1925:

> Between the idea / And the reality / Between the motion / And the act / Falls the Shadow… Between the conception / And the creation / Between the emotion / And the response / Falls the Shadow… Between the desire / And the spasm / Between the potency / And the existence / Between the essence / And the descent / Falls the Shadow (Shmoop University Team 2008:[sp])

If the word "shadow" is replaced by the gap, the poem may as well be describing where the sublime lies. The gap or liminal space or void in which the self floats or disappears, is unnameable and something that is terrifying. But the sublime seems to be able to create a connection within or even across that gap in order to blur binary boundaries and dialectical opposites to forge transcendence in immanence and immanent transcendence, a chiasma that lasts as long as the artwork like a science fiction film is viewed.

While some may scoff at both the continued study of the sublime even as it evolves according to the spirit of the times, as well as at the analysis of the much-derided science fiction genre, to form what I refer to as the science fiction film sublime, I argue that both are worthy of study. As Morley states, "For those who assert that our lives cannot be accounted for within a paradigm which states that we exist within a life-world produced wholly from cultural signs and systems, the sublime defines the moment when thought comes to an end and we encounter that which is 'other'" (Morley 2010b:18). I would suggest that the encounter is also with the self as other, as mentioned in Chapter Five of the study. Furthermore, the science fiction sublime may help us interpret film through transcendence in immanence. Sobchack (2008:198, emphasis in original) states that to "varying and certainly wide degree… this embodied and phenomenological structure enables us to 'make sense' of *every* movie – whether it mobilizes this structure *transparently* (if intensely) in an action film or figures it

explicitly in a film with manifestly ‘spiritual’ or ‘religious’ subject matter”. It may be near-impossible to make sense of the sublime in relation to defining it, but the sublime can be a dialectical framework through which to derive meaning from artworks, including SF film.

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