UNIVERSITY OF VAASA

Faculty of Philosophy

English Studies

Kaj Lafond

“Resistance is Futile”

The Borg and Technophobia in *Star Trek*

Master’s Thesis

Vaasa 2020

TABLE OF CONTENTS

UNIVERSITY OF VAASA
Faculty of Humanities
Author: Kaj Lafond
Master's Thesis: "Resistance is Futile"
The Borg and Technophobia in *Star Trek*
Degree: Master of Arts
Programme: Comparative Cultural Studies
Date: 2020
Supervisor: Helen Mäntymäki

ABSTRACT

Tieteisfiktio on mediatyyppi joka mahdollistaa pohdinnan siitä, miten teknologian kehitys voi vaikuttaa ihmiskunnan tulevaisuuteen. Sen kautta voimme käsitellä pelkoja teknologian kehityksen vaaroista ja ymmärtää millä tavoin integrointi teknologian kanssa voi johtaa perinteisten yhteiskunnallisten ja henkilökohtaisten arvojen tukehduttamiseen.

Tutkimuksen tavoitteena oli selvittää, millä tavoin *Star Trek* -tieteisfiktion *The Next Generation*, *Voyager* ja *Enterprise* -televisiosarjoissa sekä *Star Trek: First Contact* -elokuvassa esiintyvä Borg-rotu ilmentää teknofobiaa, eli pelkoa ja epäluuloja teknologiaa kohtaan.

Analyysi osoitti, että borgit on tarkoituksella suunniteltu siten, että niiden fyysinen olemus, elämäntapa ja käytös ovat epämiellyttäviä psykologisesti perustavalla tavalla. Borgien väkivaltainen keino sulauttaa uusia elämänmuotoja heidän yhteiskuntaansa tapahtuu teknologisen integroinnin kautta, ensiksi nanoteknologian injektiolla uhrin kehoon, ja sitten elinten ja raajojen korvaamisella teknologialla. Lopuksi uhrin oma mieli tukahdutetaan ja se liittyy osaksi verkotettua kollektiivia, jolla on vain yksi yhteinen ääni.

Tutkimalla borgeihin liittyviä kohtauksia ilmeni, että yksilön sulauttaminen tällaiseen teknologiseen yhteiskuntaan koetaan karmivaksi siksi, että tässä prosessissa yhteiskunnallisesti tärkeäksi koettu yksilöllisyys ja identiteetti katoaa. Kun yksilö sulautetaan borgien kollektiiviin, hän muuttuu teknologian kautta toiseuden ilmentymäksi ja kyberneettiseksi viholliseksi.

Toisaalta tämä tutkimus osoitti, että borgit heijastavat luomisensa aikakakauden yhdysvaltalaisia yhteiskunnallisia ja poliittisia asenteita. Niiden teknologinen kollektiivisuus ja yhdenmukaisuus rinnastetaan neuvostoliittolaiseen sosialistiseen yhteiskuntaan. Borgit koetaan luonnottomina ja yhteiskunnan perusarvojen, kuten perheen ja yksilön vapauden tukahduttamisen tunnuskuvina.

KEYWORDS: Science fiction, technology, technophobia, unnatural, otherness

1 INTRODUCTION

A basic and fundamental aspect of human social evolution has always been the question: Where is humanity headed, that is to say, what are we evolving towards? And are we, if not in control of our own destiny, at least able to influence or shape our future society? Good science fiction has become a genre to stimulate and challenge our imagination in this regard. Through the medium of science fiction, unfamiliar places, alien races and cultures are depicted to reflect and explore aspects of society, culture and human nature.

Star Trek is science fiction, and science fiction typically presents us with different propositions for future realities. For that reason, in this thesis *Star Trek* - in the specific television shows and feature film explored - will be examined not merely as a form of entertainment but as a mode of critical inquiry into the subject of technology and the consequences of where it may lead us, as well as an avenue for investigating the fears and trepidations associated with these technological visions and projections of the future. A quote by Ursula K. Le Guin from *The Language of the Night* (1979), is not only inspirational but I find it to be very prophetic in this respect:

> When science fiction uses its limitless range of symbol and metaphor novelistically, with the subject at the center, it can show us who we are, and where we are, and what choices face us, with unsurpassed clarity, and with a great and troubling beauty. (Le Guin 1979: 118)

A great deal of science fiction either directly deals with or is embedded in conflicting views of future technological development and the Borg collective in *Star Trek* represent one possible dystopian idea of what may happen when humans and technology fuse together. Viewed from this perspective, the Borg can be regarded as analogous of an extreme outcome where a lack of proactive societal intervention and cautionary vigilance fails to curb rampant technological progress.

The Borg are a group of aliens first introduced in *Star Trek: The Next Generation* (1988). They are a pseudo-race of techno-organic humanoid organisms; a cybernetic melding of technological and organic components into a single entity, fused at the cellular level. The term cybernetics means, here defined as Louis Kauffman: "The study of systems and processes that interact with themselves and produce themselves from themselves."[1]. As shall be explained later (see 2.4), this definition is particularly befitting as a descriptor for the Borg collective. The term pseudo-race is the most appropriate, as the Borg are not all members of the same biological race. The collective in fact consists of thousands of various humanoid lifeforms, including large numbers of humans. These lifeforms originate from various species in the galaxy who are captured by the Borg, and are then forcefully added into the collective via technological implantation and injection of microscopic nanotechnology, a process referred to by the Borg as "assimilation". Via this technology, the Borg are all linked into a unified neural network which interconnects the entire Borg society, forming a hive mind called "The Collective".

This form of functional description of the Borg proves insufficient for expressing the reality of the effect the Borg have upon the rest of the galaxy. The Borg are a malevolent, implacable and seemingly unstoppable enemy whose stated purpose is to assimilate other sentient lifeforms, fusing their unique biological distinctiveness and any advanced technology they possess into the collective, a process which, from the human perspective of assimilation, deprives the individuals of their social identity and the very essence of what distinguishes them as human. The motivations of the Borg are beyond human grasp. They do not fear death, in their collective state they do not get flustered, tired or distracted. They cannot be negotiated with, threatened, or bribed. Robb (2012: 97) summarizes the Borg: "Literally single-minded (through their sharing of one hive-mind) and not open to pleas of mercy or rational debate, the Borg's sole purpose is to conquer and assimilate other life forms in order to secure their spread throughout the galaxy". The totality of the Borg threat potentially extinguishing every vestige of humanity is not beyond logical

[1] Quote from CYBCON discussion group, posted 20th of September, 2007, 18:15

understanding but tests the limits of comprehension. As Jonathan Frakes[2] has stated: "The Borg are the greatest nemesis of all things Star Trek. It made Star Trek not only an action adventure movie, but made it a horror movie as well." (Cited in Robb 2012: 102).

The Borg embody a striking example of technology that can generate technophobia through their fundamental integration with technology and machines, beginning from an all-encompassing techno-networked societal level to each individual technologically fused Borg lifeform, and even down to each individual Borg cell being changed and altered via microscopic nanotechnology. The term *technophobia* is here defined as the fear and mistrust of technology. However, what makes the Borg such a fascinating subject for analysis is that in addition to these more directly physical, tangible and visible technological aspects, their *representational* value is rich and diverse, and incorporates multiple types of technophobia. In technophobia a multitude of traditions, philosophies and social/religious values lies embedded which can be examined to gain understanding of these elements. This provides a fertile ground for my analysis, as each individual form of these varied types of technophobia is unearthed and its manifestations analyzed in the *Star Trek* episodes and movies which feature the Borg.

1.1 Aim of Thesis

The aim of this thesis will be to study the Borg Collective*,* and how they embody aspects of *technophobia,* that is to say, the fear and mistrust of technology. It is my assertion that the Borg are a representational embodiment of technophobia in multiple ways, rendering fears of technology in various forms. These forms will be organized and discussed in the context of two broader categories. Specifically, this thesis will examine the question of technophobia and the Borg from two approaches: Borg as *the other* and Borg as the *unnatural*.

[2] Director of *Star Trek: First Contact*, and the actor who played William Riker in *Star Trek: The Next Generation*.

My research questions are:

1. In what ways do the Borg in *Star Trek* embody technophobia?
2. In what ways are these technophobic elements expressed in the *Star Trek* narratives?

For this study I will make broad use of the writings of Dinello (2005) on technophobia in science fiction. Wertheim (2002) provides an invaluable initial exploration of the various ways the Borg embody technophobic otherness and unnaturality. I will rely on the writings of Ryan and Kellner (1990) for understanding how the unnatural is expressed in science fiction. The research done by Malmgren (1993) provides my thesis with the primary theoretical basis for analysis of self and other in science fiction narratives.

1.2 Previous Studies

Dinello (2005) explains how technophobia has been observed as a recurring and prominent theme in literary science fiction since the genre's very inception. He highlights the 19th century in particular as the period during which many landmark works were written in the genre, boldly pushing the imaginative visions of technological possibilities to the forefront of public imagination on a previously unseen scale. Among the notable examples he discusses is Mary Shelley's *Frankenstein* (1818), which tackled themes of self-replication and creation of life with technology. The novel also opened up proto-themes that would later evolve into stories of androids, cyborgs and other science fiction technologies that would become staples of the genre, especially in the latter half of the 20th century. Discussing *The Time Machine* by H.G. Wells (1895) as another major example, Dinello highlights the *Eloi* race as an example of society growing dependent on and subservient to technology, with this complete dependence on technology sapping the vitality of the people (Dinello 2005: 43). Technophobia as a major theme in science fiction cinema can be similarly observed in some of the earliest cinematic examples of the 20th century. The moral implications and dangers of creating androids which are too human-like would become a major theme in these films. *Homunculus* (1916) by Otto

Rippert features the creation of a humanoid homunculus, a superior being with mental abilities far exceeding those of humans. The creature eventually grows angry at humans for treating it as a monster, and sets upon a plan to bring war and misery to all of humanity. *Metropolis* (1926) features a female cyborg, seductive but uncontrollable, eventually destroying everyone who loves her (Dinello 2005: 46).

As Dinello (2005) writes, the spectrum of technological futures envisioned in science fiction can be situated between two extremes with diametrically opposed views at each end. One extreme are the optimistic visions of "techno-heaven" where we exist in a future where technology has liberated us of all our woes and pains, an almost religious zealotry of "techno-priests" fervently preaching their gospel of how freeing ourselves of our physical bodies and uploading into artificial techno-existence will bring about essential immortality in a blissful digital evolutionary apotheosis (Dinello 2005: 1-17). Technophobia represents the other extreme end of envisioned technological futures. In these types of science fiction, technology is seen as dangerous, destructive, uncontrollable and ultimately leading to the downfall of civilization. Dinello continues by noting how war, loss of control over technological creations and loss of human identity, purpose and crumbling of society are all seen as the concomitant and seemingly inevitable result of technological progress and innovation in technophobic fiction. The positive image of a technological post-human is replaced by tales of a hopeless future full of "mad scientists, rampaging robots, killer clones, cutthroat cyborgs, humanhating androids, satanic supercomputers" (ibid. 2).

Ryan and Kellner (1990) examine classic science fiction movies of the 1970s and 1980s, focusing on technophobia in these films as reflecting conservative fears of technology as a metaphor for the unnatural and as something against the core conservatist values of freedom, individualism and the family. While the text itself is brief, it sheds light on the many subtle foundational layers that form these fears of technology. The text brings to the forefront an important idea, namely that technology can be often viewed as *representational of the unnatural*, and disruption of the status quo and social order. These ideas are worthy of further exploration.

Borg in relation to *otherness* was examined in *Aliens R Us* (2002), where Christine Wertheim specifically investigates the Borg as 'The Other' in the feature film *Star Trek: First Contact* (1996). She sees the Borg as "the best *Star Trek* bad guys ever, as entertaining as Q[3] and infinitely more complex" (Wertheim 2002: 75). Wertheim explains how the Borg are such an engaging and unique representation of otherness because they are a fusion that combines multiple elements to form "the uncategorizable other" (ibid.). She succinctly summarizes many of these aspects when she comments that the Borg are "a synthesis of every cliché about the Other: a complex (con)fusion of insect-virus-commie-machine, with a hive mentality" (ibid.). Wertheim's writing supports the interpretation of the Borg as being clearly technophobic manifestations, yet the aspects she outlines are examined in a very brief fashion, and they shall be more thoroughly examined in this thesis.

1.3 Material

As will be detailed later on (see section 2.3), the *Star Trek* universe is vast. The franchise contains numerous alien races with advanced (future) technologies, and many of the shows' episodes directly deal with the dangers of technological development posing unexpected dangers. Similarly, cybernetic lifeforms are often encountered, most prominently with the central character "Data" in *Star Trek: The Next Generation.* The Data character is presented as a good and moral being, genuinely striving to live a just and good existence. Yet, he possesses superior strength and in many aspects has superior mental capabilities to humans, a fact which is shown to be potentially frightening to people. Similarly, his close-to but not-quite human behavior is shown to cause anxiety and unease in many episodes. Yet, I believe the Borg represent the best exploration of

[3] A member of a continuum of highly evolved species with seemingly god-like abilities of creation and time-space manipulation. The Q often serve as a plot-device for throwing humanity into scenarios which force us to face the worst of our nature, to question our perceptions of reality and crucially to come face-to-face with our own bold-faced hubris, as when Q forces the premature first contact of the Federation and the Borg.

technophobia in the franchise, with their specific fusion of organic life and technology, therefore I have chosen to focus only on them in this thesis.

An issue particular to analyzing the Borg is that many of their features which will be discussed in this thesis are not specific to one episode and are instead recurring themes that are built upon over many instances of episodes (and the feature film *Star Trek: First Contact*) with Borg appearances. The episodes and feature films I have selected are those which I believe best explore and illuminate the Borg drones themselves, the technologically embedded Borg society and, crucially, the attitudes, emotions and reactions of the ship crews and other humanoid lifeforms when dealing with the Borg. During the course of *Star Trek: Voyager* five 'liberated' former Borg crew members are introduced to the show, namely the children Icheb, Mezoti, Azan, Rebi and the prominently featured Seven of Nine, who would later join the crew of *Voyager.* While the children's and Seven of Nine's struggles to regain their essential humanity and learn to function in society are a recurring theme in the show and worthy of exploration, I have chosen to limit the episodes analyzed to those which specifically explore the technologically embedded fears and mistrust of the Borg.

Most sci-fi franchises of this scope will have inherent inconsistencies and retroactive revisions which alter the story and interpretation of past events, commonly referred to as "retconning". Fortunately for my analysis, I feel that the presentation of the Borg stays relatively consistent within my chosen analysis material, building a steady narrative within the Star Trek universe from *Star Trek: The Next Generation* up to and including a single episode featuring them in *Star Trek: Enterprise*. The various "re-booted" *Star Trek* movies and TV-shows produced after *Star Trek: Enterprise* will not be included or discussed in this analysis, as they feature dramatic re-imaginings of the *Star Trek* universe, and do not include the Borg in any prominent capacity.

Accordingly, the primary source material I have chosen is comprised of selected episodes from *Star Trek: The Next Generation* (Paramount Domestic Television, 1987-1994), *Star Trek: Voyager* (United Paramount Network, 1995-2001), *Star Trek: Enterprise* (United

Paramount Network, 2001-2005) and the feature film *Star Trek: First Contact* (Paramount Pictures, 1996).

The complete list of refenced material is:

Star Trek: First Contact (Motion picture)

Star Trek: The Original Series:

Season 2, episode 24 “The Ultimate Computer”

Season 2, episode 25 “Bread and Circuses”

Star Trek: The Next Generation:

Season 2, episode 16 “Q Who”

Season 3, episode 26 and Season 4, episode 1 “Best of Both Worlds” Parts 1&2

Season 5, episode 23 “I, Borg”

Season 7, episode 11 “Parallels”

Star Trek: Voyager:

Season 3, episode 26 and Season 3, episode 1 “Scorpion” Parts 1&2

Season 4, episode 12 “Mortal Coil”

Season 5, episode 2 “Drone”

Season 6, episode 2 “Survival Instinct”

Season 6, episode 26 and Season 7, episode 1 “Unimatrix Zero” Parts 1&2

Star Trek: Enterprise:

Season 2, episode 23 “Regeneration”

For the analysis of the specific scenarios and examples discussed, I will give a description of the particular television show episode or movie scene in question. I will attempt to transcribe character dialogue in the scenes as accurately as possible. When transcribing scenes, some character actions and descriptions of scene events will be inserted between

square brackets [ ] to set them apart from the dialogue. When referencing specific episodes and scenes from the various series and movies, I shall occasionally make use of the abbreviations commonly used by the *Star Trek* community, in the following manner: *Star Trek: The Original Series* will be abbreviated TOS, *Star Trek: The Next Generation* as TNG, *Star Trek: Voyager* as VOY, *Star Trek: Enterprise* as ENT, and finally the feature film *Star Trek: First Contact* as STFC.

1.3.1 Public Concerns about the Dangers of Technology

A landmark step in assessing and laying the groundwork strategy for technological progress took place at the UNESCO conference held in Alberta, Canada, 1-3 November 1998 to discuss the topic 'Toward a New Contract between Science and Society'. The timing of the conference bears relevance to this study, as *Star Trek: The Next Generation* (which introduced the Borg to the franchise) ended its production run in 1994, with the Feature film *Star Trek: First Contact* (with the Borg as the primary antagonist) having premiered in 1996. Within the conference notes, it becomes clear how already at the turn of the century there existed a growing fear within the general public on a communal and individual level that they will have to suffer the indirect (and often unforeseen) negative consequences of technological innovations. To address this public uneasiness, the conference focused on examining how scientific progress affects both society and its governance. Although scientific and technological innovations have brought great benefits to mankind there have been unfortunate, unforeseen consequences both in the short and long term which has instilled negative perceptions in many peoples' minds and created "A considerable measure of public mistrust of science and fear of technology" (UNESCO 1998). Most pertinent in regards to the frightening visions of 'technology run amok' which will be explored in this thesis, the UNESCO text proposes a sensible and rational ethical guideline: "Scientific advances are never in themselves, a guarantee of social benefit. Technology has to be treated as a servant of society, not a master" (ibid.).

The conference notes stressed that scientists and innovators must bear in mind the consequences of their work. Awareness of both the potential benefits, and critically, the

possible dangers of technological progress without sufficient caution and oversight can be seen repeatedly examined, as in this extract from the text:

> Medical biotechnology is a leading-edge area of science in which the pace of progress is perhaps faster than society's capacity to deal with the ethical and social implications. Genetic research, while offering major benefits for disease diagnosis and treatment, also poses serious questions about the nature and sanctity of human life and the protection of human rights.

More recently, much debate amongst leaders in tech innovation has taken place. Particularly so in the past few years, with for example Elon Musk, Bill Gates, Steve Wozniak and Stephen Hawking having all recently expressed strong concerns about the dangers of technology and ever improving Artificial Intelligence:

> His [Stephen Hawking] was not the only voice warning of the dangers of AI - Elon Musk, Bill Gates and Steve Wozniak also expressed their concerns about where the technology was heading - though Professor Hawking's was the most apocalyptic vision of a world where robots decide they don't need us any more. What all of these prophets of AI doom wanted to do was to get the world thinking about where the science was heading - and make sure other voices joined the scientists in that debate. (Rory Cellan-Jones. BBC Technology. 20th October, 2016.)

It is quite clear then that the rapid pace of technological progress, and the technophobia it provokes is an important, topical subject for exploration. It is my belief that the sheer pace of technological progress and development has meant that social analysis and planning have not only failed to keep pace with this evolution but are lagging ever farther 'behind the curve', a sentiment shared in the quote above. Technological progress is simply happening, seemingly with little, or at least insufficient oversight and lacking much intervention or a guiding moral compass.

1.3.2 Significance of Technophobic Media Texts

There exists a clear need for further study and analysis of media texts with technophobic themes, as they can be beneficial in helping to understand and make tangible the often-

abstruse fears of, and general uneasiness toward technological progress. The core of Happer and Philo (2013) examines the role of the media in what they term "the construction of public belief and attitudes and its relationship to social change" (Happer and Philo 2013: 321). The choice of the word *constructing*, rather than informing, influencing or for example educating, is very descriptive of their approach to the subject. They examine both the negative and positive aspects and possibilities and address the vested interests which seek to manipulate public opinion and both distort and limit information available to the public. Happer and Philo do, however, also highlight the positive potential of both traditional and new media to both inform and positively influence public opinion and stimulate debate and awareness regarding technological evolution and its social consequences. This is reinforced by their conclusions on the need for and importance of repeated exposure to media messages (Happer & Philo 2013: 321-333).

In Kelly's *What Technology Wants* (2010), he proposes that the future of technology and society is best viewed from a holistic perspective. When he writes that "technologies are nearly living things" (Kelly 2010: 150), he postulates his basic premise of the need for proactive interaction between society and the technologies impacting upon our lives. Kelly has in fact invented a term for this, "the technium" (Kelly 2010: 11-13). It is a term that encapsulates his philosophy, which combines, by a process of morphosis the interaction between technology and culture, art and social institutions which he believes creates "the extended human" (ibid. 32) of our modern and ever evolving technological society. He continually returns to the concept "nearly living things", which postulates the idea that technology evolves in many different ways, driven by success in meeting technological needs in different but interactive fields, whether the criteria be commercial, scientific or social. The key elements in the ultimate impact of technology on society are human awareness and oversight. Without this, technological advances will be short sighted and driven primarily by commercial interests with profit being the main objective.

Building on this premise, Kelly (2010) comments that without awareness there can be no oversight, suggesting that popular media, particularly in the form of science fiction, can

be an excellent vehicle of bringing these questions to a wider audience in a palatable format. Used in this manner, intelligent science fiction can help to bridge the gap between limited "elitist" information (only shared and understood between experts in the field) and the wider audience, disseminating and re-formatting the information into an easily assimilable format. With this is mind, exploring technophobia inside the framework created by the futuristic vision and diverse universe of *Star Trek* provides an excellent platform for unravelling the socio-cultural foundations and fundamental elements which constitute the basis for these fears of technology, and a vehicle for exploring these aspects in an engaging and approachable format.

1.4 Method

The research undertaken in this thesis is primarily of a qualitative nature. The key criteria for consideration in my analysis is that the scenes examined are in some way connected to the technological aspects of the Borg while also conveying phobic attitudes or reactions to them. These embedded thematic elements can occasionally be quite subtle, and I shall attempt to properly expose these elements in the analysis section. It is important to note here that some examined scenes will pertain to more general types of fear related to otherness and the unnatural. The selection of theoretical material for these comes from hypotheses that have arisen from my own examination of the shows, and which I believe to be embedded elements in the scenes analyzed. These will gain relevance in the analysis, as their actualizations will be linked to technophobia as they are manifested in some manner which involves the Borg technological society.

1.5 Structure of the Thesis

This thesis will be divided into two theoretical sections and corresponding sections of analysis, namely Borg as the other, and Borg as the unnatural. Here it should to be noted that there is an issue here with division of theoretical material between these two categories, as categorical placement is often based on the theory author's method and the context of their analysis. There are also instances of certain subtypes of technophobia not

clearly belonging in one category or the other, and in some other instances, a degree of overlap between these two categories is apparent. Therefore, the categorical division of my analysis into “Borg as the other” and “Borg as the unnatural” should not be seen as a statement of my belief in how they should be categorized but more as a pragmatic means of organizing material within the thesis as a method to connect similar themes and ideas.

I begin the theory sections with a brief examination of what constitutes ‘science fiction’, as it is a genre that often struggles to define itself. Following that, I will explore theories of *speculative* and e*xtrapolative* science fiction and defining the difference between the two, for which I shall rely mainly on the writings of Suvin (1979), Benford (1987) and Malmgren (1993). Then I will establish how the *Star Trek* material I analyze primarily belongs into the extrapolative category. This categorical placement will help shed light on what can be garnered from examining the technologically embedded narratives of *Star Trek* and the associated technophobia related social and psychological roots within. This delineation is useful for my analysis in part due to how the extrapolative fiction of *Star Trek* in many ways reflects today’s global society and future alternative pathways of technological evolution. This interpretation is strengthened by the realization that many of the futuristic devices envisioned and imagined in the various *Star Trek* iterations, such as touch screens and ‘smart’ mobile communication devices later became real inventions, with possibly many more yet to be realized.

To form a dais for specific analysis of the Borg in the context of technophobia, it is necessary to first have a basic understanding of the science fiction framework which the Borg exist in and a grasp of the fictional universe of *Star Trek*. I will therefore briefly explore the origins of *Star Trek* in section 2.3, then move on to lay out the socio-cultural galactic framework of its universe, the technologically embedded future and human society it postulates, and the basic narrative and symbolic purposes of the alien races encountered within. Understanding these fundamental aspects of *Star Trek*, the science fiction theory behind it and the stark contrasts between the Borg and other sentient races encountered in the franchise will help to understand the nature of the Borg, their representational value and narrative role, as well as the real-world inspirations behind

their conception. This understanding will in turn aid in analyzing the Borg in relation to technophobia. The concept of technophobia itself will then be briefly examined before moving on to theoretical material on 'self and other' and the unnatural.

To help clarify the concept of technophobia itself, I shall focus on two major works discussing the topic, namely *Technophobia!: Science Fiction Visions of Posthuman Technology* (Dinello 2005) and *Technophobia: The Psychological Impact of Information Technology* (Brosnan 2003). As a basis for exploring otherness in relation to technophobia, I shall explore and define the concept in a brief manner. As both the concepts of *the other* and *the unnatural* are very broad and open to interpretation, I shall attempt to focus and limit their particular application to only that which is most relevant to this thesis so as to avoid excess furcation in their exploration, particularly in regards to the religious and metaphysical issues raised by their definitions. Specifically, for examining the concepts of otherness and self, and to aid in the selection of the aspects of those concepts which best apply to the thesis discussion, I will rely on the research of Mead (1997) in: *Mind, self, and society from the standpoint of a social behaviorist* and Onbelet (1999) in *Imagining the Other: The Use of Narrative as an Empowering Practice*. For relating these concepts to my analysis of the Borg and technophobia, I shall chiefly employ two sources: *Self and Other in SF: Alien Encounters* (Malmgren 1993) and *Aliens R Us: The Other in Science Fiction Cinema* (Sardar, Ziauddin & Cubitt 2002). For defining the concept of the unnatural and applying it to science fiction, I will make use of the research of Benford (1987) in *Effing the Ineffable*. Then, to aid specific analysis of the unnatural in relation to the Borg, I will primarily make use of the research of Ryan and Kellner (1990) in *Technophobia*. Similarly to the concepts of self and other discussed above, once the concept of the unnatural has been sufficiently laid out, I apply the theoretical material for examining specific instances of technology as the unnatural in the Borg-related scenes.

The main task in the analysis sections will then be to investigate specific scenes from my chosen material, and then applying comparative analysis, look for evidence of thematic expressions and analogous elements to the theories outlined in the theory section. These

theories originate from fiction novels and cinema as well as from real world manifestations of technophobia, and more general types of fears and mistrust related to otherness and unnaturality which are brought out by some aspect of technology in the *Star Trek* narratives. If there are parallels to be found, how are they realized and how well developed is this thematic linking? Some of the analysis will be done via direct thematic comparison of other science fiction novels, television shows and films, and then exploring thematic and plot parallels with those of the chosen *Star Trek* episodes and films which feature the Borg. Examples of specific movies used in this fashion include *THX 1138* (1970) and *Logan's Run* (1976).

Throughout the thesis, as the main source for general *Star Trek* information I will make repeated use of Brian J. Robb's *A Brief Guide to Star Trek* (2012). Considered the quintessential *Star Trek* sourcebook, the work provides a source for information such as biographies on the shows' creators and writers, the politics (both national and production) and social influences which affected the franchise. I shall employ Robb's work as a primary source of more general and logistical data such as production dates and places, first airing times and so forth. The text also contains discussion of the role of technology within the series, and includes details on the introduction and conceptualized purpose of the Borg as well as some discussion of social issues which were reflected and explored in the *Star Trek* stories. Robb's work provides my analysis with a chronicled timeline and the essential elements of the *Star Trek* franchise which culminated in its major popularity and influence on popular culture.

2 THEORY FRAMEWORK

What is science fiction? As Suvin (1979) argues, science fiction is a genre that stubbornly defies attempts to pin-down and define it. Suvin's sentiment is echoed by Roberts (2006) over two and a half decades later, in that there is still a distinct lack of scholarly agreement on how to define and delimit what qualifies as science fiction and what are the distinguishing features of it compared to other types of fiction. He continues by pointing out a curious enigma here, as when presented with the question most people will have a fair sense of what science fiction is, despite the quagmire of scholarly attempts to find a satisfactory definition. As Thomas (2013: 16) comments, this in practice can be a view of the genre defining itself via the experience of the reader or viewer, "knowing SF when you see it". While admirably practical, this is of course an unsatisfactory method of classification from a scholarly viewpoint. Roberts (2006: 1) continues by noting how despite this problematic issue of genre delimitation, most book stores will have a section dedicated to science fiction. These will often feature bright, colorful covers and detailed artworks of space ships, futuristic cities, robots and so forth.

One of the most prominent theories is Suvin's (1979) structuralist attempt to distinguish the science fiction genre as one of "cognitive estrangement". The defining characteristic in Suvin's definition is that it contains what he calls a "novum", a narrative type with a *plausible* device or machine that in some way completely differs from the norm of accepted reality, something completely new. As Svec and Vininski (2013) point out, this novum can be actualized in many ways, commenting that "the novum could be an alien, a discovery, or a new technology, but it must be possible, an extrapolation of our current understanding of science". This definition of the theory seems to apply fairly well to most science fiction. However, the broadness of the concept of novum creates its own issues with definition, and this ambiguity makes it difficult to accept Suvin's theory without further refinement.

Cornea (2007) notes how since the inception of science fiction film there has been a strong thematic interest in technologies. These come both in the form of the potential social and

philosophical “delights” as well as the dangers associated with technology, with her listing industrial, communications and biological technologies as major categories (Cornea 2007: 248). She makes an important observation when she comments on how these basic sci-fi features are largely shared between written works and sci-fi film. This simplifies thematic analysis as specific material can be analyzed comparatively to both written and film material without the need for changing essential methodology.

Hollinger (2014) comments how more recent critical appreciation of science fiction views it not only as a narrative genre, but as a mode of discourse in which the ideas presented within a narrative can be seen, in the words of Csicsery-Ronay (1992: 388), as “a mode of awareness, a complex hesitation about the relationship between imaginary conceptions and historical reality unfolding into the future”. Hollinger’s text definitely helps with the appreciation of what science fiction can offer as a combination of genre and mode, but the boundaries of definition remain ever yet unclear. Tom Shippey’s comment on the genre is one that summarizes this dilemma quite elegantly: “science fiction is hard to define because it is the literature of change and it changes while you are trying to define it” (quoted in Jakubowski and Edwards 1983: 258). What can be inferred from this discussion is that there is some definite leeway in regard to interpretation when positing the question of whether a given work of fiction may be categorized as science fiction or not, leaving some room for personal interpretation without invalidating a person’s view on the matter.

2.1 Speculative and Extrapolative Fiction

Speculative fiction is a prominent thematic sub-type of the science fiction genre. It seriously challenges established reality via “thought experiment” (Gannon 2003: 2) which, in the words of Darko Suvin (1979: 63) is “validated by cognitive logic”. Wolf-Meyer (2019: 5) notes how social theory and speculative fiction are very much interconnected and essentially the “two sides of the same coin”. This assertion is strengthened by his analysis which forms a strong link between the traditions of both social theory and speculative fiction, as he summarizes the writing of Collins (2008):

> The very questions that anthropologists, sociologists, and psychologists have been pursuing since the nineteenth century have also been motivating speculative fiction writers, from Mary Shelley, Jules Verne, and H. G. Wells, to our contemporaries. (Wolf-Meyer 2019: 5)

Reinforcing this notion, Benford (1987) discusses how possibly the most fundamental speculative theme of science fiction is the alien. Alienation in its more familiar forms of social and cultural alienation is of course a common theme in all fiction, but what science fiction uniquely provides, in Benford's (1987: 23) opinion, is a foundation for exploration of the "extremes of alienness". Indeed, as he argues, science fiction balances the desire for certainty with "the irreducible unknown" (ibid.). He continues by noting that fiction focused on the truly alien can deconstruct classical humanism in the arts and may serve to shock and break down the comfortable reality in front of us, possibly with a goal of educating the audience. Malmgren (1993: 31) raises the value of this when this type of science fiction succeeds in its rendering of alienness "the reader experiences a transfiguration that interrogates and problematizes all human assumptions and beliefs".

Benford also makes an important observation when explaining how in science fiction "the universe may be unknowable and its 'moral' structure might forever lie beyond humanity's ken" (Benford 1987: 31). Yet, this does not mean that science fiction endorses a slump into cognitive pessimism, quite the contrary, as Benford himself highlights, the *science* part of science fiction "represents knowledge". Indeed, for any alterations of consensual reality these stories present, they must present a "sound, scientifically responsible hypotheses to explain the alterations" (Gannon 2003: 2). Malmgren (1993: 31) expresses similar notions by commenting how science fiction represents "the possibility of gaining some kind of purchase, however tenuous, upon the unknown". This is the essential defining aspect of speculative science fiction. Here a note needs to be made on the usage of the term *speculative* fiction versus *extrapolative* fiction. In *The Oxford Handbook of Science Fiction,* Landon (2014) discusses how the difference between *speculative* and *extrapolative* science fiction is a contentious one, as the terms are often used interchangeably by various scholars at different times. However, in contemporary analysis, approaching the question from a diachronic approach the consensus is that while very similar in overall nature, *speculative* science fiction can be

seen as taking more liberties from reality, and leaning further towards the fantastical and implausible. In contrast, *extrapolative* science fiction is generally more rooted in existing science and technology and built upon intellectually well-founded "What if..." types of narratives. This is also the definition I have chosen to adopt for these terms in my analysis.

Malmgren (1993: 31) explains how extrapolative alien encounters involve a process of naturalization where we apply "existing human or scientific paradigms". The alien in these types of encounters may be physically similar to humans and humanoid in general appearance, or dramatically different from us, but as Malmgren crucially comments: "The anthropocentric alien may be more or less than human, but it is human nonetheless, and its humanity reflects back upon our own." (ibid.). The value of this type of science fiction narrative is highlighted by Benford (1987) when he comments that "Rendering the alien, making the reader experience it, is the crucial contribution of SF" (Benford 1987: 33). In contrast to the extrapolative type, speculative encounters are those which resist categorization and this type of associative relativity, and involve aliens of a variety which are difficult to describe, as they exist in a form or state of being fundamentally foreign to us. Speculative encounters often delve into meta-human and post-human concepts, "something extrahuman, nonhuman, or metahuman, this encounter necessarily plays upon and with religious ideas of faith, transcendence, and apotheosis" (ibid.).

The kind of science fiction that focuses on wars and catastrophic outcomes is what Gannon (2003: 1-3) refers to as "hard science fiction". He explains how this type of fiction is set apart from other types of imaginative fiction narratives in both the method of delivering its stories and the end results. As Wolf-Meyer (2019) comments, in apocalyptic fiction when the apocalypse comes, it never comes in singular form. An example is given how in *War of the Worlds* (2005) it is not enough that the aliens attack with their seemingly invulnerable war-machines and immensely powerful weapons, there must also be a global threat of the red alien growth that kills all plant life and spreads around the globe to cause a pandemic of famine and poisoning of the air and soil (Wolf-Meyer 2019: 2). In what he has dubbed 'Wyndham's rule', multiple forms of apocalypse strike simultaneously and often globally, and while humanity may survive, our existence

will be fundamentally socially or physically altered from what it was before. But as he also points out, the future is hard to predict or even imagine. Wolf-Meyer poses a question: What can be done to manage a future with complex interaction of a variety of apocalyptic events intertwining with complicated and ever-changing social relations, global politics and capitalistic reality? (Wolf-Meyer 2019: 2-5). These are some of the questions tackled by speculative and extrapolative science fiction, and play an impactful role in exploring these scenarios of technological apocalypse, either individually or within narratives where many catastrophes strike simultaneously. The Borg in *Star Trek* are a prime example of a science fiction antagonist which embodies both alienness and catastrophe in this type of narrative.

2.2 *Star Trek* as Extrapolative Science Fiction

With consideration to the parameters outlined above, it is my assertion that *Star Trek* can be categorized primarily as *extrapolative* science fiction, in contrast to the *speculative* encounter type, at least within the scope of the subject material explored in this thesis. It is true that some episodes in *Star Trek* do involve speculative encounters, where the starship crews encounter lifeforms from a different dimension or plane of reality, beings of pure energy and other such hard to grasp modes and forms of existence (The Q being one notable example). Yet, taken as a whole, in particular in the cases of *Star Trek: The Next Generation* and *Star Trek: Voyager*, the vast majority of the alien race encounters in *Star Trek* can be categorized as extrapolative. These are the ones most developed and continually returned to in storylines, with the Borg also belonging in this category. This will be further detailed in section 2.3.4.

2.3 The Universe of *Star Trek*

TAYLOR: Don't tell me, you're from outer space?
KIRK: No, I'm from Iowa. I only work in outer space.
(*Star Trek IV: The Voyage Home*)

Before proceeding with the analysis of the Borg, it is necessary to first understand the origins of and the basic framework of the fictional universe of *Star Trek* and the socio-cultural and technological setting of the future envisioned within. While this science fiction theory is traversed, it will also be useful to consider the background material in the context of the timeline of its inception and the cold war social attitudes prevalent during the inception of the original *Star Trek* television show and those of later years of *Star Trek: The Next Generation* and *Star Trek: Voyager*.

2.3.1 The Origins of *Star Trek*

Building from a long tradition of science fiction writing with its roots in turn of the nineteenth century works such as Mary Shelley's *Frankenstein* and Jules Verne's novels of speculative imagination, science fiction publications had seen a boom in popularity in the first few decades of the twentieth century. This boom brought science fiction to a much wider audience in the form of short-story fiction magazines, printed on cheap wood-pulp paper (often referred to as 'the pulps'). Very quickly these types of publications established a standard formula for storytelling in the genre. Building upon these, in the mid-1950s paperbacks began to replace the pulps, and would often contain deeper, richer backstories and fictional universes, such as Frank Herbert's *Dune* and the writings of Harlan Ellison (Robb 2012: 14).

1950s television was eager to adopt this popular form of fiction, but it was initially simplistic and juvenile, often aired as part of children's television programs. Melodramatic and crude, partially due to technological limitations of the time, some of this serialized science fiction was actually performed as live broadcasts. Much changed in 1957 when the Soviet Union launched its Sputnik satellite, sparking a real-life space race and by the early 1960s the audiences who had grown up with 1950s sci-fi were ready for something with more substance and depth, and a more discerning approach (Robb 2012: 14-15). It was exactly this demand that *Star Trek,* the "Wagon Train to the stars" (ibid. 10) would come to meet.

Star Trek was the brainchild of accomplished screenwriter, former airman and police officer Gene Roddenberry. According to Robb (2012) Roddenberry claimed to have developed *Star Trek* so that he could explore social issues such as gender, race and social conditions embedded in the guise of science fiction set in a technologically advanced future (Robb 2012: 52). The original *Star Trek* concept laid the foundation for social observation and commentary, with each series reflecting the social environment it was produced in (Robb 2012: 53). *Star Trek* was envisioned from the very beginning as the thinking person's science fiction. This is important to keep in mind when analyzing the subject matter in more depth.

Generally speaking, the episodes of *Star Trek* are focused on the travels of an intergalactic starship, namely the *U.S.S. Enterprise* and *U.S.S. Voyager* for *Star Trek: The Next Generation* and *Star Trek: Voyager*, respectively. The shows primarily focus on a featured cast of a captain and senior bridge officers, with some less prominent recurring supporting characters. The captain and senior officers are the characters whose lives and interactions with each other and the alien races around the galaxy the show focuses on. A plethora of what *Star Trek* fans colloquially refer to as "redshirts" can be seen in the episodes. These are usually lower ranking crew members, essentially serving as misfortunate cannon fodder when the crew encounters something hostile or dangerous during the course of their explorations. A typical episode plot features the crew exploring the universe, analyzing anomalies and unknown parts of space and flying from planet to planet, whereupon they face a task or challenge of some type. These tasks vary in type from meeting new alien species to coming to the rescue of a ship or colony in distress. Most episodes have some kind of moral or ethical dilemma which the crew will have to wrestle with at the core of the plot. Examples might include tackling challenging issues such as:

- Do artificial beings count as being *alive*?
- What are the consequences to consider about time travel to the past?
- Can a human love a holographic being?

Star Trek: The Next Generation, where the Borg make their first appearance, begins around what would be the year 2364 on our calendar. The basic premise of this future is

almost naively optimistic. *Star Trek* posits a future where humanity, after first nearly annihilating itself in World War III, finally unites after making contact with sentient alien lifeforms to form a global community focused on a common goal of prospering as a species. Currency is then abolished on Earth, and instead of working for money, people work to improve themselves, and collectively strive towards the betterment of humanity. As Captain Picard explains to Lily Sloane, a woman from the 21st century[4] in *Star Trek: First Contact:*

> CAPTAIN PICARD: The economics of the future are somewhat different. You see, money doesn't exist in the twenty-fourth century.
> LILY: No money? You mean you don't get paid?
> PICARD: The acquisition of wealth is no longer the driving force in our lives. We work to better ourselves and the rest of humanity.
> (*Star Trek: First Contact*)

One might say that in the 24th century money has been replaced by personal reputation as the chief currency an individual tries to accumulate. This also means that in such a society the ego, an individual's personal reputation and defining of oneself becomes a thing of great importance. This is also why, conversely, loss or devaluation of the self is seen as such a devastating loss.

2.3.2 Technology and Alien Races in *Star Trek*

Star Trek is a franchise featuring a multitude of fantastical, advanced technologies and filled with scientific language and terminology. The dialogue of the shows prominently features what is colloquially referred to as 'techno-babble', with the crews often referring to anti-matter, plasma conduits, omega particles, phaser beams and so forth. Yet, as David Allen Batchelor illustrates in the NASA website article *The Science of Star Trek* (2016), the scientific terms and amazing technologies featured in the shows are not just pure fantasy. Indeed, many of the ideas behind them stemmed from the latest works of

[4] The plot of *Star Trek: First Contact* involves *The Enterprise* travelling back in time from the 24th to the 21st century.

theoretical physicists and visions of the evolution of existing technology and those still in earliest developmental phase. This applied particularly to the shows and movies of *Star Trek: The Next Generation* and beyond. However theoretical and fantastic they may have been, the shows gained a level of grounding from this core of a scientific basis (Batchelor 2016). This is a major part of what makes *Star Trek* such a fruitful platform for contemplations of future technologies and for theoretical analysis: it extrapolated visions of how future technology might materialize from the wild imaginations of engineers and boldest scientific theories at the time of each show's conception. As pointed out above, this type of extrapolative fiction is particularly valuable for explorations of real-world inspired technophobic themes.

Moreover, when we consider how many of the futuristic devices featured in the shows have come to be real-world inventions, it lends an additional measure of credibility to those seemingly outlandish visions of future technology. As Brian J. Robb writes in his monograph text *A Brief Guide to Star Trek*:

> Much of the 'future' technology depicted in Star Trek has come to feature in everyday life, from the communicator-like mobile phone to computer touch screens now taken for granted. Many of the world's most prominent scientists were inspired to pursue their careers ... due to an early exposure to Star Trek. (Robb 2012)

The immense popularity of the franchise[5] has had its own hand in the realization of many of these technologies, as there are many examples of modern technology and gadgetry being directly inspired and influenced by the gadgets of *Star Trek* (Robb 2012: 273-274). As an example, Robb notes how there is a striking resemblance between the PADD[6]'s featured in *Star Trek: The Next Generation* and modern-day tablet computers, and that the mobile phones of today contain many of the features of *Tricorders* and *Mobile Communicators* of *Star Trek: The Original Series*. Additionally, more Star Trek

[5] By 1991, *Star Trek* had grown to the point where the sixth feature film, *The Undiscovered Country* grossed a record breaking worldwide take for the franchise of $96.8 overall. (Robb 2012: 86)
[6] Personal Access Display Device

technology seems close on the horizon: “Even more extreme technology, such as tractor beams, the holodeck, warp speed and deflector shields, are seen now as less like science fiction and more realistic in the future due to advances in the understanding of quantum physics” (Robb 2012: 273).

In the 24th century *Star Trek* universe, because of such near-miraculous technological innovations, most diseases and ailments of the 21st century (such as cancer and AIDS) have been eradicated, and a person can be fully healed and restored from all but the most grievous of injuries. Similarly, ‘replicator’ technology has solved the problems of world hunger and water shortages. Such devices are able to convert pure energy into matter, and in doing so are able to form anything from chocolate mousse to a socket wrench seemingly from thin air, in a type of hyper-futuristic 3D-printing. The replicators also allow the reverse of this process, allowing most trash and discarded items to be recycled, converted into and stored as energy, conveniently solving the issue of waste disposal. Global pollution has been largely cleared up and the greenhouse effect reversed. The practical benefit of these inventions for *Star Trek* narratives is that they allow fading the nitty-gritty aspect of mundane activities and the daily grind to survive and put food on the table and allows the stories to focus on broader themes of exploration, morality, galactic politics and so forth.

2.3.3 Humanity in a Technological Universe

What has been described so far paints a picture of an idyllic, paradise-like society in a golden age of civilization. However, this superficially ‘utopian’ society has many inherent contradictions and dangers. Many of the episodes in the various series explore the dark side and dangers of this kind of society embedded in advanced technology. As mentioned earlier, the main goal of life in this society is no longer acquisition of wealth but honor, reputation and power. Yet there lies a very real danger of loss of purpose for individuals in this type of society, as Michio Kaku explains in *Physics of the Future*, “whenever there is a conflict between modern technology and the desires of our primitive

ancestors, these primitive desires win each time. That's the Cave Man Principle" (Kaku 2012: 14). Bearing in mind that genetic evolution will always lag behind social evolution, we are biologically still the hunter-gatherers our primal ancestors were 100,000 years ago. Our primitive survival instincts and emotions, both good and bad remain in the hearts of mankind (ibid.). This type of conflict between lofty, utopistic idealism clashing with baser human instincts and the reality of a harsh universe is a recurring theme in *Star Trek.*

In the latter half of the 21st century, humanity is confronted with the reality of a galaxy teeming with sentient life and advanced technology. A common threat and sense of purpose leads to the founding of a United Earth Government (an idealized version of the current United Nations). This was followed by the benevolent United Federation of Planets[7] (UFP) with utopian principles of universal liberty, rights and equality. As will become clear later on (see 2.4), the Borg collective draws a stark contrast to these moral principles espoused by humanity. Interstellar travel as a mundane and readily available reality facilitates narrative plotlines and interspecies interactions for the Federation on a galactic scale. Faster than light spaceship travel (referred to as 'warp speed') and transporters[8] form an essential component of the fictional narrative that springs from this foundation, as this provides the shows with an intergalactic back drop comprising a myriad of comparative societies, albeit viewed from a human perspective. To address this, the shows cleverly inserted various aliens in central character roles, most notably the Vulcan science officer Spock in *Star Trek: The Original Series* and the sentient (self-aware and self-conscious) cyborg Data[9] in *Star Trek: The Next Generation* to represent an outsider's view and commentary of humanity. The android lifeform Data follows a path which is diametrically opposed to that of the Borg Collective. His (to keep to the gender characterization used in the show) story involves a constant quest and a struggle

[7] The United Federation of Planets (UFP), usually referred to as the Federation, is a fictional interstellar federal republic in the Star Trek science fiction franchise, composed of numerous planetary sovereignties. (Wikipedia)
[8] Transporters are devices which temporarily convert people and objects into energy streams, which can then be instantly transferred over long distances and reformed back into their physical forms. Transporters serve a practical narrative role of speeding up transitions between locations.
[9] To clarify, "Data" is the name of the character, not a description.

to better himself as he strives and desires to become more human. In this respect, Data stands as a polar opposite to the evolutionary path of the Borg.

Star Trek presents a futuristic vision of the ever-increasing interdependence and integration between humans and technology. As Brian J. Robb points out in *A Brief Guide to Star Trek* (2012), the inherent dangers of advanced technology and developing artificial intelligence (AI) has been a recurring theme throughout the series from its very inception. Indeed, as he points out, of the 79 episodes of the original *Star Trek* series, no fewer than 12 dealt with this subject in detail (Robb 2012: 52). In a somewhat prophetic statement Robb also quotes Spock in the original *Star Trek* series episode 24, "*The Ultimate Computer"*, as saying "computers make excellent and efficient servants, but I have no wish to serve under them" (Robb 2012: 52). This lends credence to the interpretation that *Star Trek* explores dangers of technology, highlighting how our ever-increasing dependence and immersion in it has many dangers. The fear of those technological developments and their possible end results are an integral element of technophobia.

The Prime Directive[10] stands as the moral foundation of the *Star Trek* mission, which is the principle of non-interference in the internal development of other worlds and civilizations that are less technologically advanced. The executive summary of the order was given in *Star Trek: The Original Series* "*Bread and Circuses*" (1968) as "no identification of self or mission; no interference with the social development of said planet; no references to space, other worlds, or advanced civilizations". In this future scenario, while as a society, humanity has reached a high level of technological achievement, we are wary of exposing other civilizations to it. Yet, there is also an internal contradiction of benevolent liberal values contradicting with the strong military aspect of the Federation and its large, well-armed starships. As Robb (2012: 11) comments "This was a future that displayed great advances in communications and medical science, but also offered similar advances in weaponry, such as photo [sic] torpedoes and phasers."

[10]A broader outline of the Prime Directive principles can be found at http://memory-alpha.wikia.com/wiki/Prime_Directive

Within the noble declaration of moral commitment of the Prime Directive lies the possibly inescapable confrontation of technological evolution conflicting with issues related to social evolution and religion in all its many configurations, indeed the purpose of life as we perceive it. The diametrically opposing visions of the future portrayed by humanity (Starfleet) and the Borg Collective seems to leave no room for compromise. Yet, the *Star Trek* captains and crews are never particularly representative of Starfleet Command. Diverse as they have been, each captain maintained a common allegiance to the Prime Directive and shared the common characteristic of bending or breaking the rules as they interpreted the situation, a shared ability to think outside the box, and strikingly to retain their individuality both personally and representatively. There lies a clear juxtaposition worthy of exploration here. Namely how the Borg Collective imperative to conquer and assimilate is representative of human history of war, conquest and subjugation, whereas the *Star Trek* crews champion an enlightened social evolutionary concept of humanity.

2.3.4 Narrative Role of *Star Trek* Species

Critics of *Star Trek* often point out that some central aspects of the shows such as ‘universal translators’ (a narrative gimmick used to explain how nearly everyone apparently speaks English in most of the *Star Trek* shows) are implausible even with a stretching of the imagination, and poke fun at how a majority of the sentient alien races are depicted as essentially human with mostly cosmetic differences. However, these choices make sense - apart from the practical consideration of the production issues when attempting to create truly alien lifeforms in a believable format - when one considers the earlier discussion on how the series’ creator Gene Roddenberry planned to use alien races to mirror and explore certain aspects of human nature and society. In this regard, the essentially human form of these aliens provides a relatable framework for socio-cultural exploration without the negative reaction of approaching these issues via direct analysis. In other words, the other races and societies portrayed in *Star Trek* act as palatable representations of aspects of humanity. As Sardar (2002: 5-6) comments: “that’s why

science fiction needs aliens … they are the dark antithesis that illuminates the patches of light within the structure of stories, throwing into relief what it is to be human."

A few major humanoid races in Star Trek are worth noting as archetype examples of this type of alien representation, and understanding their purpose will help to understand the role of the Borg via contrast:

- The Klingons are a proud, strong warrior race. A distillation of the feudal warrior society and way of life, they value honor and glory in combat above all else.
- The Vulcans represent the noble idealist aspect of humanity. Formerly a savage, brutal warring society, they represent the philosophical human attempting to rise above our animal nature and to live in a society of pure logic and reason.
- The Ferengi are a mercantile race that can be seen as the embodiment of human greed, selfishness and lust for power without the leash of morality to curb these pursuits.

Picture 1. The character *Quark*, displaying the troll-like physical appearance of the Ferengi race and exhibiting the race's trademark lust for wealth and profits. (*Star Trek: Deep Space Nine*)

In the examples of these races, while all are clearly alien in both origin and appearance, we can identify aspects of their essential nature as extreme realizations of particular facets of human nature and society. Where we can identify fundamental shared elements of existence, such as the will to preserve one's life or possessions, we find a cultural anchor which allows us to negotiate with even the most hostile and unpleasant alien cultures.

Via this fundamental kind of identification, both the viewing audience and the characters in the shows can understand the goals, desires and motivations of alien species, and hence we are able to empathize and interact with these races despite our many differences. Even with the tensions, rivalries and wars between these multitudinous species, they all fall within the parameters of understandable social identity, in the form of exaggerated forms of human social behavior. In understanding them we can also find their weaknesses, to manipulate them if necessary, or in many cases, to find a way to defeat them. Conversely, we can relate to other species encountered in *Star Trek* only once we discover some manner in which they share aspects of human nature. This holds true for most alien races encountered in *Star Trek*, until the human race encounters the Borg. This is why understanding the essential representational purpose of the other races, such as the examples mentioned above is so important, for it is the very un-relatability and un-categorizable nature of the Borg that forms a large part of why they are such a frightening nemesis.

2.4 The Borg

> 'We are the Borg. Lower your shields and surrender your ships. We will add your biological and technological distinctiveness to our own. Your culture will adapt to service us. Resistance is futile.'
> (Borg ultimatum to the Federation in *Star Trek: First Contact*)

The Borg are introduced in *Star Trek: The Next Generation* season two, in the episode "*Q Who*" and later play a major recurring role in the show, as well as in *Star Trek: Voyager*, continuing to make appearances in later *Star Trek* series, their enduring popularity making them a staple of *Star Trek* novels, video games and merchandise as

well. They play the central antagonist role in the major motion picture *Star Trek: First Contact.* While small clues are given as the franchise progresses, the actual origins of the Borg are never made clear. The unanswered question in this regard is did they originate as a biological lifeform or an artificial one. As the Borg Queen explains in *Star Trek: First Contact*:

> BORG QUEEN: [Talking to the android 'Data'] We too are on a quest to better ourselves, evolving toward a state of perfection … By assimilating other being into our collective we are bringing them closer to perfection.

During the course of *Star Trek: Voyager*, the Borg sphere of influence is shown to consist of hundreds, if not thousands of planets, countless vessels and billions of Borg. The Borg pseudo-race in fact consists of thousands of various (mostly humanoid) lifeforms, assimilated into the collective, which interconnects the entire Borg society. The term pseudo-race is slightly problematic, but arguably the most apt, as the Borg strain and challenge the definition of what constitutes *race*, as they do not reproduce naturally. In *Star Trek: The Next Generation* episode "Q Who", the crew of the *Enterprise* encounter maturation chambers for Borg infants, already assimilated and implanted with Borg technology. In *Star Trek: Voyager* episode "Drone", the Voyager crew encounter a similar chamber containing a fetal stage drone:

> TUVOK: [Referring to a drone in maturation chamber] It appears to be in the fetal stage.
> SEVEN OF NINE[11]: I don't understand. The Borg assimilate. They do not reproduce in this fashion.

It is later revealed that the infants are merely captured infants undergoing rapid maturation in preparation for full assimilation. This confirms that the Borg do not reproduce sexually and increase their numbers exclusively via assimilation. This is another major aspect of unnaturalness central to technophobia related to Borg. From what can be inferred, it becomes clear that the Borg do not place any value or meaning on gender. The difficulties of mating individuals in a collective consisting of thousands of races lends credence to this pragmatic mode of propagation.

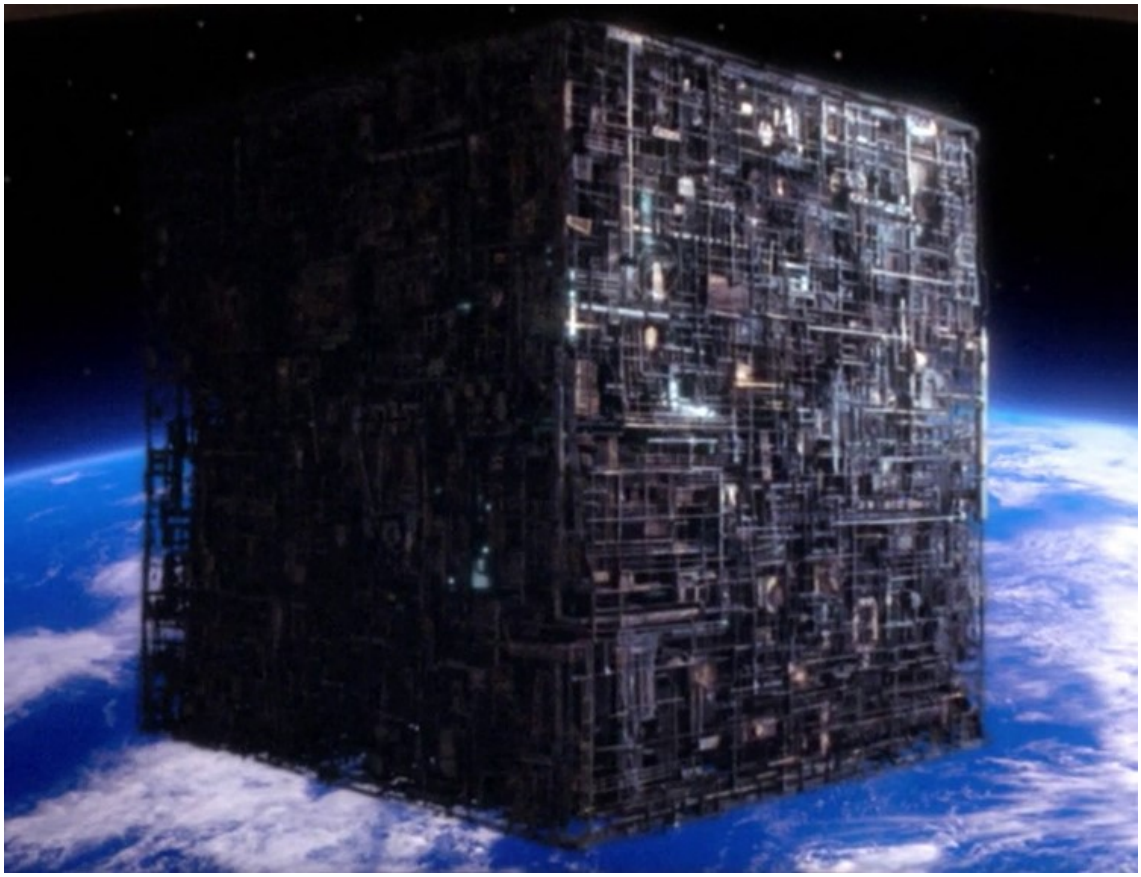
[11] A former Borg drone, liberated by the Voyager crew in the VOY episode "Scorpion".

Picture 2. A typical Borg drone, featuring the types of implants, cybernetic enhancements and prosthetics common to assimilated Borg. (*Star Trek: The Next Generation*)

In Borg society all drones are essentially equal in value and rank, and equally expendable. The collective forms an insect-like colony, a hive-mind with a single, collective voice. As the Borg Queen comments in *Star Trek: First Contact*: "Our thoughts are one". Indeed, the existence of the Queen serves to further the insect-hive comparison of the Borg collective. The Queen is unique among the Borg, there is only ever the single one. Fierce and ruthless in protecting the Borg, she is the only part of their society that shows emotion. She is a member of an unspecified alien race with an innate ability to process and disseminate the nearly unfathomable amount of information flowing though the collective. The Queen performs the crucial role of bringing order to a chaotic collective. While the Queen does have the ability to directly control and command a large number of drones and ships (as seen in *Star Trek: Voyager* "Endgame"), the collective primarily

functions autonomously to act out its primary goals and objectives without direct manipulation from the queen, much akin to how an ant nest or bee hive functions.

Borg space vessels are mostly constructed in simple geometric shapes such as cubes and spheres, with multiple redundancies and no command bridge. They are massive in size, the cubes measuring over three kilometers along an edge and possessing an internal volume of 28 cubic kilometers (as seen in *Star Trek: Voyager* "Dark Frontier"). A single cube can often contain well over 100,000 drones, equipped with highly advanced and adaptive technology with firepower rivalling that of an entire armada of ships.



Picture 3. A Borg cube vessel hovering ominously above Earth.
(*Star Trek: First Contact*)

The lack of centralization ties in with the lack of hierarchy or command structure amongst the Borg. Their hulls have no paint, decorations or added aesthetic elements aside from

the small Borg emblems featured in the ship interiors. As a race with no consideration of group morale or need for symbolism to build unity, the purpose of this symbol has been theorized by fans as likely to be used as a tool to express who they are when the Borg communicate with non-verbal lifeforms[12]. This emblem is featured in the 1992 *Star Trek: The Next Generation* trading card named "*The symbol of the Borg*". Its description reads:

> Resembling a great red claw over a background of circuitry, the symbol of the Borg is as mysterious as the race it represents. The Borg symbol may possibly define an amalgam of living tissue with computer circuits, as the Borg are believed to be a race of cybernetic organisms.

The Borg in the fictional setting of the *Star Trek* universe make possible a complex interplay between the Borg Collective and the sentient races of the United Federation of Planets. The Borg appear to be the perfect antithesis of all those values which The Federation (and humanity) value most dearly: Freedom, liberty, co-operation and diversity. The Borg are also an embodied commentary of mankind's dependence on technology. Starfleet in this instance being representative of a future in which human (and allied humanoid) societies remain in control of technology in various evolutionary scenarios, in other words a scenario where technology remains subservient to human society. The Borg on the other hand are representative of a scenario where technology has become irreversibly integrated and assimilated into every aspect of their existence. Borg integration with technology is essential and irreplaceable, and happens on both an individual, physical level via implantation and integration of technology with biological lifeforms, as well as on a social level, with interlinking technology forming the entire foundation of their hive-like collective society.

2.5 Technophobia

What is *technophobia?* As summarized earlier, technophobia as a general term refers to the fear and mistrust of technology. Brosnan (1998) explores the origins of the concept.

[12] An idea brought forth by users "schindleria" and "gsabram" on the *Star Trek* Reddit discussion forum. Cited 17 May 2018. Discussion thread available at https://www.reddit.com/r/startrek/comments/1hx4oh/why_do_the_borg_need_a_symbol/

He notes how negative reactions towards, and avoidance of new technologies, particularly in relation to the increasing numbers of personal computers in the 1980s was noted as an important psychological and social phenomenon. The people displaying anxiety and distrust towards computers were labelled as "technophobes" and the psychological phenomenon labelled as "technophobia" (Brosnan 1998: 13-14). Brosnan makes an important note on the *phobia* part of the term, explaining that while differing from traditional phobia types, the similarities are enough to warrant the choice: "Whilst not a phobia in the classic sense (such as agoraphobia), there are many similarities in aetiology and 'treatment' which warrant the term 'technophobia" (Brosnan 1998: 10). Khasawneh (2018a) remarks that technophobia in people is not confined to particular countries, as studies have shown conclusively that technophobia on some scale exists in practically every developed country in the world.

However, the studies of technophobia up to the beginning of the 21st century mostly focused on a basic level of reactions toward computers. This research was prioritized, as the adoption of computers by the workforce was critical for the growth of automation and industry from the 1970s onward. However, as Khasawneh (2018a) comments, this is a misappropriation of the term, as technophobia was simply equated with computer phobia, yet the term is potentially much broader in application. This traditional, limited application proves insufficient in a contemporary setting, as technology in the modern age is integrated into every aspect of our lives, from our homes to our cars, mobile phones and laptops. Technologically integrated and networked 'smart' functionality can be seen fused into everything from a washing machine to a bird feeder. Khasawneh proposes a definition of technophobia which is much more universally applicable:

> An irrational fear and/or anxiety that individuals form as a response to a new stimulus that comes in the form of a technology that modifies and/or changes the individual's normal or previous routine in performing a certain job/task. Individuals may display active, physical reactions (fear) such as avoidance and/or passive reactions (anxiety) such as distress or apprehension. (Khasawneh 2018b: 10)

Out of the many definitions I have encountered, I believe this one encapsulates the term the best. It gives proper consideration to the social and psychological reactions to any type of technology, not just computers. I would, however, suggest expanding this definition slightly, by adding that this definition applies not only to routines of jobs and tasks, but to any circumstance where technology is included in such way as to affect the environment of a person's daily life. Khasawneh (2018a) notes that literature which examines technophobia has a tendency to focus on a specific type on technology. This can be seen as supportive of science fiction as having academic value in being able to introduce multifaceted technology to technophobic narratives.

3. SELF AND OTHER

This theory section focuses on the related subjects of *self* and *other* as they relate to technophobic themes and the possible constituent elements that form them. The aim is firstly to establish the importance of the social and personal value of self and how it relates to other, so that the scenes examined can then be analyzed for how the Borg are counter to, and disruptive to these established sociocultural values and traditions. These can then be referred to when examining the scenes for evidence of their manifestations.

3.1 Self versus Other

In sociological theory and analysis, the concepts of 'the other' and 'otherness' (sometimes capitalized as The Other and Otherness) are commonly used when defining the identities of groups and individuals. 'The Other' (also referred to as Constitutive Other) in the context of this thesis can be defined as the state of being different from, and alien to the *social identity* of a person and to the *identity of the Self*. As Onbelet (1999) explains, in literary theory the crux of otherness lies in definition by divergence, in differentiating how I/we differ from others. She continues by commenting on the philosophies of continental philosopher Emmanuel Levinas: "… Levinas, argues that the self cannot exist, cannot have a concept of itself as self, without the other." (Onbelet 1999). From this it follows that this form of separation of self from other is integrally tied to the definition of those features which characterize that which is 'not us', and the *de facto* state of uniqueness it creates. As Levinas argues: "I am defined as a subjectivity, as a singular person, as an 'I', precisely because I am exposed to the other. It is my inescapable and incontrovertible answerability to the other that make me an individual 'I'" (Levinas 1984: 62). The crucial discovery here is the realization that it is this very process of defining 'other' which also delineates 'who I am' or 'who we are', and one cannot exist without the other.

Triandafyllidou (1998) discusses the relationship between nationalism and the definition of 'the other'. In a similar manner to how Onbelet (1999) formulated the defining of self to be interdependent with the defining of other, she comments that "national identity is defined not only from within … but also from without, that is, through distinguishing and differentiating the nation from other nations or ethnic groups" (Triandafyllidou 1998: 593). She argues that the core argument of nationalists is essentially founded on a fundamental definition of 'us' and 'them' (ibid. 596). Indeed, nationalism can be used as one of the most universal and straightforward examples of defining otherness.

3.2 Existence without Self

The root of human society lies in our concept of social identity, from a family unit to extended family to tribe, from clan to nation. We differ from our primate cousins in our ability to extrapolate the basic unit into larger groups based on ethnicity, religion, ideology and so forth. Yet, as Mead noted in his classic text on social behaviorism, *Mind, Self, and Society* (1972), the self is not necessary a part of the life of an organism, even when the organism has the *capacity* for self. As Mead explains: "The self has a character which is different from that of the physiological organism proper" (Mead 1972: 135). Indeed, the self does not automatically exist with the organism, but only exists *a posteriori*, and develops through the individual's social interactions as part of a process and his/her relations to said process (ibid.). What follows from this is that as we tie our experiences and memories to self, we organize them in relation to each other to where they are relationally situated in the chain of self-experiences.

Mead continues: "We do so intimately identify our experiences, especially our affective experiences, with the self that it takes a moment's abstraction to realize that pain and pleasure can be there without being the experience of the self" (ibid.). He notes how lower forms of animal life do not involve self, much as human intelligence in certain habitual and instinctual actions and states of being does not. In more modern contexts what Mead refers to as 'lower forms of animal life' is conceptually problematic, as more contemporary discussions, such as in Morton (2010) lean more toward a non-hierarchical

view, contesting the separation promoted by such humanist theories. Morton also explains how there has been a dramatic shift in thinking in this regard since the 1970s, as such anthropomorphically centered thinking was historically used to justify lesser treatment of animals and in colonialist propaganda as a tool for justifying slavery and exploitation of 'lesser humans' (Morton 2010: 21-35). Nevertheless, Mead's conceptualization of the non-self is still applicable for my later analysis, as these kinds of distinctions are problematized by the essential nature of the Borg. While there is an important distinction between the experience itself and how we process and associate it in relation to the self, humans tend to inevitably organize all experiences in relation to the self (Mead 1972: 135-152). When we understand this, we can see why the notion of lower animal-like existence without self can be such a powerfully frightening notion to people.

3.3 Loss of Self

It is clear that for human beings, the definition of self, and the delineating of self as a definite, separate and unique identity is an immeasurably important thing, especially in contemporary Western culture (Steinvorth 2009). When the Borg capture lifeforms, they are integrated into the collective with a process referred to as assimilation. As mentioned earlier, this process initially takes place by infecting the victim with 'nanoprobes', microscopic machines that turn the victim into Borg on a cellular level from the inside out. To better illustrate and help grasp the implications of the Borg assimilation process and the losing of essential self, a parallel in modern society can be found in the ever-rising incidences of dementia and Alzheimer's, an insidious and seemingly unstoppable disease which robs people of their identity and humanity. As Andrea Gillies remarks in *Keeper* (2010), a chronicle of her mother-in-law's slow descent into Alzheimer's: "… just what it is that dementia takes away ... Answer: everything; every last thing we reassure ourselves that nothing could take away from us." (Gillies 2010: 1). This is analogous to the experience of what happens to a person when they are assimilated, as the individual loses access to their mental capacities that formed and defined their personality. The horror of this experience from the point of view of the family and friends of those with

Alzheimer's also draws a dramatic parallel with the experience of losing friends, family and colleagues to Borg assimilation.

When examining science fiction shows and films produced in the United States, it is worth considering the importance and social prominence of the democratic values espoused in U.S. politics. Values such as liberty and freedom are so ubiquitously intertwined with social identity that, as Dickson (2014: 2) comments: "American identity and ego are inseparably wrapped up in democracy". Liberty is the more central of these concepts as they relate to the self, as "It is the right to be an autonomous individual, whose thoughts and beliefs are unrestricted, and whose actions are limited by reason, conscience, consent, and the rule of law" (ibid.). Inexorably connected with these American ideals is the high value given to each individual person's voice, the right to express one's opinion and their vote mattering in the democratic process. Narratives involving societies where these rights are suppressed are a staple theme in dystopic, or 'Orwellian' science fiction. An important part of this suppression is the use of technology to suppress individualism and free thought, which places these stories firmly within the technophobic genre. As outlined earlier, the Borg collective functions as a single uniform mono-voice, where no individual voice or opinion matters. This societal system is starkly counter to the democratic values outlined above.

The classic example of this is George Orwell's "*1984*" (1949), where so called "telescreens" are installed in every home, workplace and public area. These allow for visual and auditory monitoring of every person at all times, with the slightest hint of subversive thoughts immediately leading to disciplinary action by the government. A more extreme example of absolute thought control imposed via technology can be seen in the movie *Fortress* (1992). It features a futuristic prison run by a corporation determined to mind control its inmates. Every inmate has a punishment device implanted within their stomachs, referred to as an "intestinator". The truly sinister aspect of the prison is its ability to monitor dreams. As part of their punishment, any kind of pleasant memory experience is disallowed for the prisoners. If an inmate has a pleasant dream, say a memory on a romantic encounter with a spouse, this is deemed an illegal thought

process, and punished with intestinal pain via the implanted device. *The Matrix* (1999) is a prominent example of control and suppression via technology. The movie depicts a dystopian future where humanity exists only within a simulated reality, the digital world of 'the matrix'. Humans exist only as raw materials for harvesting by the machines which have taken over the planet. What makes the dystopic vision of *The Matrix* so striking is that while the entirety of humanity is essentially under complete control of the machines, they are unaware of this fact. By manipulation of the brain and its electrical signals, the machines make the people who live within the matrix completely believe they are living in the world of the 1990s. This represents one of the darkest visions of an Orwellian future, and an extreme type of technophobic manifestation. All of these examples present a reality that runs counter to the professed American values of freedom and the voice of the individual.

As noted earlier (see 2.4), the Borg essentially eschew gender, as they do not reproduce, and instead multiply by assimilating other sentient races. Similarly, other socio-cultural gender definitions and roles become irrelevant in the Borg uniform collective conscience. In Patricia Melzer's *Alien Constructions: Science Fiction and Feminist Thought* (2010) she notes how "Feminists in particular recognize the political implications of the [science fiction] genre and increasingly employ science fiction narratives to explore social relations" (Melzer 2010: 4). As Nagoshi, Nagoshi and Brzuzy (2014) write, the right for each person's self-definition of identity is becoming ever more important in politics and civil rights discussions, with defining of oneself in both sexuality and gender identity becoming a keystone issue of civil liberties and rights. Indeed, this is becoming a prominent theme in science fiction, with the *Star Trek: Discovery* television show recently introducing the first transgender and non-binary characters to the franchise. Reflecting these trends, the popular social media website *Facebook* previously allowed registrars to select from a list of 71 gender options to define themselves. Now it has moved on from even that, allowing users to enter a completely freeform definition of their identity and even choose the pronoun by which they are to be addressed. This - similarly to what was discussed about existence without self - clearly shows the importance placed

upon self-definition in society, and conversely shows that having these aspects of self stripped away can be a powerfully frightening notion.

3.4 Cold War Nightmares and Unstoppable Technology

In the cold war days of the 1950s and 1960s, the United States Government would air public service announcement cartoons featuring cheery music and a turtle named Bert. These would instruct children to "duck and cover" in case of an emergency, most essentially in case of a Soviet nuclear attack. This is reflective of the political situation of arguably the most intense era of the cold war, which included the Cuban missile crisis of 1962. The arms race between the United States and the Soviet Union continued to escalate with no end in sight. Each nation was building and stockpiling an ever-increasing arsenal of devastating nuclear bombs, many of them mounted on intercontinental missiles, capable of striking almost anywhere in the world. The balance of nuclear power between the two nations would ensure what became known as 'MAD', or 'mutually assured destruction' if nuclear conflict were to ensue. However, parallel to this aspect of the arms race was the constant technological development of bombers, tanks and other military hardware taking place on both sides. As Cocroft and Thomas (2003: 19) explain, behind this escalation was a fear - a different kind of technophobia - where each side feared the other would develop superior military technology to the point where they would become unstoppable upon launching a first strike, a technological juggernaut of sorts. Booker (2001) explains how as early as the beginning of the 1950s, fiction would display embodiments of this fear of total annihilation. Initially they would come in the guise of monsters or aliens such as in *King Kong* (1950). As time passed, the allusions would become less and less subtle, with eventually films directly picturing Soviet conquest and domination becoming more popular, with notable examples such as the cult classic *Red Dawn* (1984) depicting a USA which has been invaded by the Soviet Union. With the collapse of the Soviet Union this direct depiction of the Soviet Union/Russians as antagonists would continue to a lesser degree, but the general theme of communism representing the evil antagonistic force, subversive to the American values of liberty and freedom would remain prominent (ibid.).

Robb (2012) notes how in *Star Trek: The Original Series* oppositional politics represented within the show were relatively simplistic, with the Klingons as the primary antagonist race of humanity. A not-very-subtle line can be drawn to connect the presentation of the Klingons with how the Soviets were perceived in the U.S. in the late 1960s. As time went on (both in the real world and in the *Star Trek* universe) political attitudes changed and the bad guys of the next *Star Trek* show (*The Next Generation*) would reflect a more subtle and multifaceted approach to the mosaic of world politics. These included the Ferengi, who were originally intended as a sobering representation of unregulated capitalism. Unfortunately (in the light of this goal) they quickly devolved into comedic figures (Kelly 2012: 143). After these attempts came the addition of the Borg, "A more serious enemy – and one not susceptible to reasoned negotiation" (ibid.). The Borg society, with its inherent loss of individuality and submitting to the common purpose could certainly be representative of the superficial public perception of the Soviet Union which remained rooted in Cold War attitudes as embodied by the Stalinist regime.

4 THE UNNATURAL

This theory section focuses on the specific manifestations of technophobia as they relate to the unnatural. The aim is to first establish the notion of the natural and how technophobic science fiction can display themes that are seen as counter to such bedrock social ideologies, and how technology in such science fiction is often presented as disruptive to society and the prospering of mankind. A number of classic cinematic examples of science fiction involving these themes will be examined as to how they exhibit and express these themes. This section will also include theoretical material on more general types of fears of which there is initial evidence to believe are embedded in the narratives examined - based on Wertheim's suggestions and my own exposure to the shows - and brought about via technology in some manner. These are unnatural in the sense that they are things generally feared and avoided on a more psychologically primal level.

Hillman (2017) explains how all moving picture soundtracks, such as those in television shows and movies are comprised of "Narrative, Abstract, Temporal and Spatial sound areas" (Hillman 2017: 13). In the context of science fiction, the abstract sound area is particularly valuable. As Hillman details, this category includes "Atmospheres, backgrounds, room tones, sound effects and music" (ibid.). The value of these is that a Sound Designer can use these elements to define or greatly enhance the emotional tone of a scene, "to steer and intensify the intended emotional experience for listening-viewers" (ibid.). Therefore, it is worthwhile giving at least some consideration to these elements when analyzing scenes in science fiction, as they play a role in the conveyance of unnaturalness to the viewer.

4.1 Natural Order

Ryan and Kellner (1990: 58) discuss how "Science fiction films concerning fears of machines or of technology usually negatively affirm such social values as freedom,

individualism, and the family", and also note how during the latter half of the 20th century, technology was "frequently a metaphor for everything that threatened 'natural' social arrangements" (ibid.), often provoking conservative responses. This conservative view of technology is as something against nature and a metaphor for dramatic changes that effect and cause tumult in social institutions. The often abstract yet pervasive idea of natural order belies social practices and institutions in all aspects of human interaction. Technology forces us to question and quantify the idea of what is 'natural', and represents the idea that "nature might be reconstructable" (Ryan and Kellner 1990: 58), an idea which introduces the possibility that the natural is used simply as a way to legitimize existing power structures and social order. Examined in this light, the physical reality and concrete effects of technology fade to the background, as it becomes much more of an ideological viewpoint, juxtapositional to everything natural and a threat to the notion of ideology. Science fiction, particularly technophobic science fiction, provides arguably the best vehicle for deconstructing the metaphor of the natural (Kuhn 1990: 58).

4.2 The Valorized Individual

Ryan and Kellner (1990: 58-56) give two classic cinematic examples of anti-natural order technophobia with parallels to Borg narratives in *Star Trek*. The first is George Lucas's *THX 1138* (1970). It features a cybernetic society where people are stripped of their individuality, names replaced by numbers and sexuality suppressed (Ryan & Kellner 1990: 59). Conformity and uniformity of a collective existence in this society is enforced by invasive monitoring of the thoughts and actions of every individual. Recorded messages are constantly broadcast to the population, echoing perceived Soviet methods of brainwashing and forcing citizenry to accept party propaganda. In *THX 1138*, prosperity and strength within this mindless unity is apparent, but crucially "…the film valorizes the differentiated individual" (Kuhn 1990: 59). This represents a directly liberal attitude of anti-socialism and shows collective uniformity as negative, suppressive and counter to liberal values pervasive in political attitudes of the era within the USA. Through rather striking visual expression, when the THX character flees this repressive society and escapes into freedom, he escapes from the uniformly white surrounding he

has existed in, to a visually vibrant, green nature, where the rising sun behind him glows yellow, defining his outline as something clear and definite – now unique and separate from the mass (ibid.).

4.3 Liberty versus Equality

Ryan and Kellner identify a distinct theme in *Logan's Run* (1976) of interchangeability of personality and sexuality. Similarly to the Borg collective, in the society of the story, every individual is assimilated into an equal, homogenized cliché. In this form of collective, the people do not know their parents. This represents a direct attack on some of the core values of conservativism, namely the disappearance of the family unit which has always been at the core of human social structure. As there are no monogamous or lasting personal relations, social hierarchies do not form and the 'natural order' of society ceases to exist (Ryan & Kellner 1990: 59-61). In *Logan's Run*, escaping to nature is once again equated with individual and social freedom, as is clearly shown when the Logan character yells "We're free!" upon his escape. In a symbolic act, Logan later destroys his enforcer partner and friend Francis who had also followed the rebels out of the city. The partner here representing a "double or copy who is Logan's functional equal, and his death individuates Logan", his very existence symbolically denying the individuality that his escape and return to the natural represents (ibid. 60-61). There is a strong linking of a return to nature with restoration of what is portrayed as the natural order in conservative ideology. As Ryan and Kellner explain:

> restoration of the traditional family … preservation of individualism, and curtailing of nonreproductive sexuality seem to be interdependent, and they all depend on the rejection of everything that technology represents – mediation, equality, intersubstitutability, and so on. (Ryan & Kellner 1990: 60)

This shows us that the natural cannot be defined without its counterpoint of technology as the unnatural, and in this way the ideology of the natural is constructed and false, in danger of falling apart under conceptual scrutiny. In both *Logan's Run* and *THX 1138* nature gains its value as the counter of urban technology (Ryan & Kellner 1990: 65-60).

4.4 Insect and Virus-like Technology

Dinello (2005) writes how even for the technophiliacs who dream of a post-human liberation from mortal flesh “a tiny terror gnaws inside them—virus fear”. As cold war era fears of atomic apocalypse fade into the background, fear of viruses and the plagues and epidemics they bring within them now “permeates Digital-era pop culture” (Dinello 2005: 246). He makes an important observation when he writes: “Virus horror has also become a powerful metaphor for technophobia” (ibid.). In this type of technophobic science fiction when we lose grip on the reigns of technology it becomes the virus that brings humanity’s extermination. Dinello describes this metamorphosis: “Like a viral infection, technology develops into an autonomous, invasive force” (Dinello 2005: 246). Some science fiction in this genre features technology that directly displays behavior analogous to that of a virus. Dinello suggests that Borg assimilation technology essentially functions in this way (Dinello 2005: 145-146).

Similarly to this theme of drawing upon deep seated fears towards deadly viruses, other technophobic science fiction can feature machines either directly taking a form resembling Earth insects and arachnids or displaying insect-like characteristics such as moving in swarms or possessing a hive-mind. Dinello raises the example of the robotic spiders in *Minority Report* (2002) being used to monitor citizenry, invading homes to perform scans on the population at any time. A prime example combining both virus and insect-like characteristics are the so called ‘Replicators’ featured in the *Stargate SG-1* television show. The Replicators are autonomous, intelligent devices made up of blocks that are joined together to form machines. These machines take a form that greatly resembles Earth arachnids. As they multiply in numbers, they form larger and larger swarms, functioning like an insect hive. They multiply by consuming any material they encounter, eating through anything and everything in their way, following their prime directive towards self-replication by any means. In doing this they are analogous to a virus invading and consuming the cells of its host, until the host is completely consumed.

4.5 Technology as the Next Form of Evolution

A notable concept in relation to technology as the unnatural is what Kelly (2010: 49) has dubbed "the seventh kingdom". This refers to how all life on Earth falls into six broad categories (three types of microscopic one-celled organisms, fungi, plants and animals). Many of these organisms have "learned to build structures" (Kelly 2010: 43-44) in such a way as to extend themselves beyond their individual biological tissue. Kelly gives some examples of this, such as the two-meter-tall termite colony mounds, which function "as if it were an external organ of the insects", or the structure of coral reefs, which "grows and breathes" (ibid). These extensions of the organisms are "animal technology". (Kelly 2010: 43-56). Kelly makes the important note that this type of animal technology is passed on genetically; a bird knows the basic blueprint for building a nest via innate evolutionary extension. Human technology, on the other hand, goes beyond this. Over the course of four billion years, life has evolved in stages of not only evolution, but in stages of "Informational organization of life's forms" (Kelly 2010: 45). Viewing the evolution of life through this lens, Kelly identifies major stages where there is a dramatic shift in biological information:

> One replicating module → Interacting population of replicating modules
> Replicating molecules→ Replicating molecules strung into chromosome
> …
> Solitary individual → Colonies and superorganisms
> Primate societies → Language based societies (Kelly 2010: 49)

Here is where human technology shifts dramatically away from natural development, as following the evolution of primate society into language-based societies brings about the invention of oral lore, then writing and eventually more organized modes of information storage via printing and books, which form the foundation for science and technology in the modern sense. A key point in the transition is that natural evolution links directly to that which forms the basis of human technological development, and while one links to

the other, the essential evolutional method and structure of this new type of evolution differs dramatically from the natural one preceding it, forming “the seventh kingdom” (Kelly 2010: 43-56).

The natural cycle of life is for individual organisms to be born, live out their lives, propagate and eventually perish, the only information carried forward is genetic. When a person dies, the unique personality and essence of that individual vanishes and is only carried on in treasured communal memory. Kelly (2010: 53) argues that in contrast to biological life, “With very few exceptions, technologies don’t die. In this way they differ from biological species, which in the long term inevitably go extinct. Technologies are idea based, and culture is their memory”. As mentioned earlier, Dinello (2005) notes how post-humanist or anti-humanist visions of the future imagine realities where humans are either fused with technology as a hybrid lifeform, or transcend flesh entirely, existing in a digital form. The implication of such an existence can be seen as unnatural in several ways. Central to practically all civilized human societies and most major religions is a certain reverence given to living individuals, some form of ‘sanctity of life’, a value given to existence. This valuing of life also lies at the heart of most modern ethical value systems. On the opposite end of the spiritual considerations is how a reverence for the dead is central to the major religions of humanity. Burial rituals and austerity in handling the dead in one form or another are the hallmark of civilized cultures. Existence in the kind of post-human technological form described by Dinello (2005) either problematizes or completely nullifies such well established values and social practices.

5 BORG AS THE OTHER

"Borg? Sounds Swedish"
(Character "Lily", before encountering the Borg in *Star Trek: First Contact)*

In the theory section I explored theory of the socio-cultural value and importance of self and how these relate to otherness. The task in this section is to now search for thematic parallels and evidence of the *Star Trek* narratives where the Borg embody themes that present them as suppressive to the self, or provoking unpleasant reactions of otherness, connected in some manner to the technological essence of the Borg. The extreme example of the Borg Collective leads the audience to question the reality of society embedded in advanced (future) technology and provides the basis for analysis of technological progress in relation to social identity and self. There are multiple aspects to tackle in the analysis, due in part to the inherent complexity of the Borg, expressed by Wertheim in her summation of them:

> Are they/it one or many? Singular or collective? They/it blur the boundaries between every category of being, singular/plural, animate/inanimate, insect/animal, disease/host, human/machine. For they/it constitute a heterogeneous dis-unity in which the main characteristics are a radical fluidity and an absolute lack of discretion between identities because, instead of a separation between discrete selves and categories there is what de Sade called 'a universal prostitution of all beings' (Wertheim 2002: 76)

The Borg collective seem to represent the quintessential alien embodiment of the concepts of the other and the unnatural. Examining in what manner these particular forms of otherness and the unnatural are brought forth and expressed in the Borg-related scenes provides the basis for analyzing them. This analysis will be done on the basis of the socio-cultural aspects of human society laid out in the theory sections.

5.1 The Borg: Self and Other

"Definitely not Swedish"

(Character "Lily", after encountering the Borg in *Star Trek: First Contact*)

Star Trek: The Next Generation "I, Borg", features a plot that specifically examines the uncanny nature of what is an individual that has become technologically assimilated into the collective. It also questions the nature of self when a single drone is taken away from this collective. The plot tackles the inherent moral conflict of fighting an enemy made up of such individuals. In the episode, the *Enterprise* crew recover a lone Borg drone, alive but damaged and injured. They discuss a plan for reprogramming the neural circuits of the recovered drone, then sending it back to the collective as a 'Trojan horse':

> PICARD: If we could get to the root command, we could introduce an invasive programming sequence, and return it to the hive.
> GEORDI: The Borg are so interconnected it would act like a virus.
> PICARD: It would infect the entire collective. We could disable their neural network in one stroke.
> DOCTOR CRUSHER: Infect it? You make it sound as if it's a disease.
> PICARD: Quite right, doctor. If all goes well, a terminal one.
> GEORDI: If this works the way I think it will, once the invasive program starts spreading, it will only be a matter of months before the Borg suffer total systems failure
> CRUSHER: Question. What exactly is total systems failure?
> DATA: The Borg are extremely computer dependent. A systems failure will destroy them
> CRUSHER: I just think we should be clear about that. We're talking about annihilating an entire race.

Here, the scene begins to raise to the forefront the moral conflicts of fighting an enemy comprised of humans and other sentient, intelligent lifeforms. Should the Borg be given the same ethical considerations as any other individuals? The discussion continues:

> PICARD: Which under most circumstances would be unconscionable. But as I see it, the Borg leave us with little choice.
> RIKER: I agree, we're at war.
> CRUSHER: There's been no formal declaration of war.

COUNCELOR TROI: Not from us, but certainly from them. They've attacked us at every encounter.
PICARD: They've declared war on our way of life. We are to be assimilated
CRUSHER: But even in war there are rules. You don't kill civilians indiscriminately!
RIKER: There are no civilians among the Borg
PICARD: Think of them as a single collective being, there's no one Borg who's more an individual than your arm of your leg.
CRUSHER: How convenient.
PICARD: Your point, doctor?
CRUSHER: When I look at my patient, I don't see a collective consciousness, I don't see a hive. I see a living, breathing boy who needs our help. And we're talking about sending him back to his people as an instrument of destruction!
PICARD: It comes down to this. We're faced with an enemy who are determined to destroy us, and we have no hope in negotiating a peace. unless that changes, we are justified in doing anything we can to survive. We proceed with the plan.

In the Borg collective each drone is essentially an unwilling participant in the actions they take, stripped of their own wills. This ethical quandary is mirrored in a later scene, where Picard is in a (literal) fencing match with Guinan, the ships bartender who also unofficially serves as a guide and source of wisdom for the crew.

[Picard is shown to beat Guinan and land several touches on her in the bouts]
GUINAN: I don't think I like this sport. Let's face it, you're much better at this than I am. [pauses] I understand we have a guest onboard [referring to the Borg drone]
PICARD: Yes
GUINEN: Is that wise?
PICARD: I'm not sure, I hope so.
GUINAN: I thought I understood you, Picard, But I don't understand this.
PICARD: It was an errand of mercy, he was injured. Doctor crusher decided, for humanitarian reasons, to care for him.
GUINAN: It's gonna come after us, you know that. You of all people know that [referring to Picard's prior experience of capture and assimilation by the Borg]
[The captain is quick to move on and change the subject, showing discomfort in remembering those past events.]
PICARD: [shrugging off the discussion] Shall we go [fence] again?

The duo set up for another match. Initially Picard seems to have the upper hand, and is about to win. Suddenly Guinan seems to get a cramp in her leg and falls back. Picard stops to help her:

> PICARD: Are you alright?
> [Guinan quickly takes the opportunity to lunge at Picard and scores a touch, winning the bout]
> GUINAN: You felt sorry for me, look what it got you.

These scenes shed light on the antipathy towards a merciless enemy conflicting with the empathy towards the living individuals that comprise them. They illustrate that what makes the Borg such a terrifying enemy is not just that they are a coldly emotionless, ruthless and seemingly unstoppable force; it is the fact that they are made up of *us* or 'our own people'; human beings (and other sentient creatures) fused with technology to become *the enemy*. As the Borg assimilate humans into their collective, within minutes that person becomes something besides that which is 'us', they can still be recognized as human or individuals who used to be "Jim" or "Lisa", but their personalities and wills, their very characters are erased and they become part of a single-minded collective. How can the Borg be called malevolent if they only act unthinkingly, and each individual drone is essentially an unwilling participant in the actions of the collective? This process of transformation into the other happens via the body being invaded and taken over by advanced technology. The technological integration is then taken even further, as often, assimilated Borg drones have entire limbs and organs removed and replaced with technology. This transformation ties strongly into the concept of technophobia as it occurs as a fusion of organic life and technology, tying in with the overarching prominent technological aspect of the Borg[13] ships and society.

The main plot of *Star Trek: First Contact* involves the threat of the entire Earth being assimilated by the Borg. In the story, Captain Picard (captain of *The Enterprise*[14]) must confront and attempt to defeat an invading Borg cube heading for Earth. If he fails,

[13] The Borg also assimilate and utilize any new advanced technologies they encounter.
[14] The starship *Enterprise*, in its various iterations, is where the show mostly takes place in TOS, TNG and ENT. It serves as a home away from home, and carries the crew from one adventure to the next.

humanity will likely fall, and the entire Earth's population fall prey to assimilation by the Borg collective. Picard himself was once assimilated into the collective in *Star Trek: The Next Generation* "Best of Both Worlds"; becoming a mindless drone, his knowledge fused with the hive mind and used by the Borg to assist in attacking humanity. This experience dramatically affects his comportment, as he knows what is in store for humanity if they fail to stop the invading ship.

> PICARD: [Speaking to Lily] Six years ago, they assimilated me into their collective. I had their cybernetic devices implanted throughout my body. I was linked to the hive mind, every trace of individuality erased. I was one of them. So, you can imagine, my dear, I have a somewhat unique perspective on the Borg. (*Star Trek: First Contact*)

Picard becomes obsessed with defeating the Borg, they become his 'white whale'[15]. His drive to stop them at all costs becomes an overwhelming obsession. The terror of his own assimilation constantly in this mind, he is willing to go to extremes to prevent his crew and subsequently the Earth from becoming assimilated. This is expressed in a later scene:

> PICARD: We've made too many compromises already. Too many retreats. They invade our space and we fall back. They assimilate entire worlds, and we fall back. Not again! The line must be drawn here, ...this far, no further!
> [An almost maniacal expression can be seen on Picard's face]
> PICARD: And *I* will make them pay for what they've done.

In a following scene, Picard a has dramatic realization of this obsession and how it has consumed his thoughts and clouded his reasoning. He recognizes how he has become the Ahab to his white whale. The prospect of humanity being assimilated into the collective had driven Picard - a character depicted throughout the show as always rational and collected - to become so overwhelmed with anxiety as to lose all his composure and to lash out verbally and physically. His anxiety further compounded by the realization that crew members may be assimilated and turned into drones, which in turn would assist the invading Borg force. The boundary between 'us' and 'the enemy' is being blurred in this

[15]A passage from *Moby Dick* is later directly quoted in the motion picture to reflect this.

way via technological transformation. This is one of the most powerful examples of direct expression of technophobia provoked by the Borg in *Star Trek*.

5.2 The Borg and Loss of Self

> BORG: Resistance is futile. We wish to improve ourselves. We will add your biological and technological distinctiveness to our own. Your culture will adapt to service ours.
> CAPTAIN PICARD: Impossible. My culture is based on freedom and self-determination.
> BORG: Freedom is irrelevant. Self-determination is irrelevant. You must comply.
> PICARD: We would rather die.
> (Borg discussion with Captain Picard in *Star Trek: The Next Generation* "Best of Both Worlds, Part I")

As Nagoshi, Nagoshi and Brzuzy (2014) detailed, high value and importance is given in modern society to being able to define and express an individual person's identity and character. The anxiety displayed by humans towards the prospect of assimilation is due in large part to the process suppressing every such aspect of the self. This is shown particularly strikingly in one of the most moving scenes in *Star Trek: First Contact*. This takes place around the 32-minute mark of the film, when the Borg have invaded the *Enterprise* and the crew is desperately trying to fend off the attacking drones. A crew member is grabbed by a drone and injected with nanoprobes. The fighting continues for a moment, then a voice is heard:

> CREWMAN: Captain--
> [The crewman is shown on the floor, the nano-infection quickly spreading and transforming him into a Borg. He lies helpless on the floor stretching his arm toward Captain Picard in a desperate plea for help, a look of horror upon his face]
> CREWMAN: Help…
> [Picard stops in his tracks and looks upon the fallen crewmember]
> [The camera is brought closer to the crewman's face, now dramatically discolored and lacerated, rapidly distorting into something unnatural]
> CREWMAN: Please… Help…
> [Picard pauses for a moment, his expression showing the full and intimate appreciation of the horrible fate that awaits his comrade. He then raises his phaser pistol and, in an act of mercy, fires a full blast into the crewman, killing him before the Borg transformation can fully take hold]

This dramatic scene can be more fully appreciated when we recall Picard's experience of being assimilated into the collective and being forced to mindlessly assist the Borg in attacking the human race, his actions as a drone directly resulting in the deaths of thousands of people.

As Picard and his squad fight to retake the *Enterprise* they encounter fallen shipmates. Picard's fears become manifested in crew members captured by the Borg only moments before. They already show evidence of the things Picard fears most. They can be seen subserviently following the other Borg drones, their eyes fixed in a blank, emotionless stare. Unable to resist, their wills are erased, individuality lost, replaced by a thoughtless compliance to the collective. While these individuals physically survive and their biological functions are sustained, they exhibit the kind of existence without self which Mead (1972) described. The transformation that happens to the assimilated individuals also echoes the experience described by Gillies (2010) on the process of mental decline and shutdown suffered by an Alzheimer's patient. Every mental faculty that comprises a person's individual character is suppressed and lost, while the person keeps living as an automaton version of their former self. This process is dramatically hastened for the assimilated, forcing the friends and crewmates of the victims to witness their decline as their essential self disappears within moments. This in turn further enhances the fears of the survivors, as they witness what is in store for them if they are assimilated. The difficulty of accepting the reality of a person being lost in this manner is highlighted in *Star Trek: The Next Generation "*The Best of Both Worlds, part II". In this scene, Riker (now captain of the *Enterprise*) and Guinan discuss the difficulty of battling against the Borg ship guided by the newly assimilated Captain Picard:

> GUINAN: You'll have to do something you don't want to do. Let go of Picard.
> RIKER: Maybe you didn't hear -- yesterday, I tried to kill him.
> GUINAN: You tried to kill whatever that is on the Borg ship. Not Picard. Picard is still here, still in the room with us.
> GUINAN: If he had just died, it would be easier. But he's been taken from us a piece at a time.

This idea of loss of self via technology in relation to the Borg is specifically explored in the *Star Trek Voyager* "Survival Instinct". The story revolves around three former Borg drones: Marika, P'Chan and Lansor. Due to a series of events during a crash landing, the trio become uniquely interlinked with each other on a permanent basis via errant Borg nanite activity. This leads to their eventual disconnection and escape from the Borg collective. This link shares everything (thoughts, emotions and physical sensations) between the three individuals in an extreme, condensed version of the Borg collective consciousness. The experience of existing with this constant interlink is shown in the initial scene where the *Voyager* crew first converses with the trio:

> LANCER: We want to become--
> MARIKA: Individuals.
> CAPTAIN JANEWAY: You want to break the neural link between the three of you?
> MARIKA: Wouldn't you? None of us is alone with our own thoughts, our own feelings.
> LANCER: Every day of my life is spent hearing their two voices in my head.
> P'CHAN: When we're asleep, we experience each other's dreams.
> EMH[16]: How's that different from life in the collective?
> SEVEN: In the collective there are billions of voices. They become white noise.
> LANCER: But, with only three--
> MARIKA: Each voice comes through clearly.
> P'CHAN: It has to stop. We must break the neural link.

Here there is evidence of a fearful attitude towards two different forms of loss of privacy and individuality from Borg technology. First is the smaller interlink collective, with its complete loss of privacy on every level. This echoes dystopian themes of loss of privacy via technology, such as those examined earlier in *THX 1138* (1970) and *1984* (1949). The second aspect of this anxiety is existence within the larger Borg collective, as here individual thought is suppressed and disappears into the collective stream. The scene

[16] EMH is short for Emergency Medical Hologram, the holographic crew member of *Voyager* serving as the ships doctor.

continues, as the trio hope to use Seven of Nine to help them break the interlink between them. This leads to the following discussion aboard *Voyager*:

> MARIKA: I can't wait to use my real name.
> SEVEN OF NINE: There is nothing preventing you from doing so.
> LANSOR: Except that most of the time I don't know whether my name is, Marika, P'Chan or Lansor. The names, the memories, [P'Chan takes over] the memories, even the thoughts flow from one to the other. [Marika takes over] I can't love, or hate, or laugh [in harmony with Lansor] or cry without sharing it with them.
> LANSOR: How can any of us take a name [in harmony with P'Chan] for ourselves.
> P'CHAN: We're not… Individuals.
> MARIKA: We're not Borg.
> LANSOR: We're nothing.

The high value given to being able to define themselves as individuals and express their own personalities comes across very clearly. This is a clear reflection of what Nagoshi, Nagoshi and Brzuzy (2014) write on the ever increasing importance of the right to freely express and define oneself, an increasingly prominent issue in politics and civil rights discussions.

Later in the episode, the implants which created this interlinking malfunction and they fall into a coma. The crew of the *Voyager* is forced to make a choice for them: Leave them to be found by the Borg, and re-join the collective thus guaranteeing their survival, or have their implants removed, which would only give them a few weeks to live, but a few weeks as individuals, free from the collective mind:

> CHAKOTAY: [Talking to Seven of Nine] There's a difference between surviving and living. They'll survive in the collective, but they won't really be alive. You know that better than any of us
> CHAKOTAY: A month as an individual, or a lifetime as a drone. Which option would you choose?
> SEVEN OF NINE: Survival is insufficient. They deserve to exist as individuals. We must terminate the link between them.

Related to this theme, in *Star Trek: The Next Generation* episode "I, Borg", the Enterprise crew talks to a recovered Borg drone, now isolated and disconnected from the collective:

> DRONE: We are Borg.
> GEORDI: Yeah but there's only one of you.

The way the Borg refer to themselves 'We are the Borg' is in itself a direct reference to suppression of individuality. The thread is continued in a later scene in the episode:

> DRONE: What is your designation?
> CRUSHER: You mean our names? We don't have designations. We have names. I'm Beverly, this is Geordi.

These scenes show clearly that Borg existence is one where their members are without a unique and meaningful name. This is the most clear-cut proof of suppression of individuality by removing perhaps the most important unique identifier we have: our names. The discussion culminates in another discussion later on in the episode:

> CRUSHER: Do you understand we don't want to be assimilated?
> DRONE: There are no other voices.
> GEORDI: Other voices?
> DRONE: On a Borg ship, we live with the others of the others in our minds. Thousands of voices with us always.
> GEORDI: [Addressing the rescued Borg drone] Every time you talk about yourself, you use the word "we". [agitated] You don't even know how to think of yourself as a single individual. You don't say "I want this" or "I am Hugh" we are all separate individuals. I am Geordi. I choose what I want to do with my life. I make decisions for myself. For somebody like me, losing that sense of individuality is almost worse than dying.

As Dickson (2014) discussed, the values of freedom and liberty are inexorably intertwined with the U.S. social identity. Promotion of these values is a pervasive theme in U.S. produced television shows and movies to this day, still echoing the cold war anti-Soviet attitudes outlined by Cocroft and Thomas (2003). The scenes examined in this chapter transcripts show that these values are also given extremely high value, prioritizing the freedom of an individual to be autonomous and to have freedom of thought and action. This prioritization is epitomized in the choice made by Marika, Lansor and P'Chan.

Echoing Geordi's remark that the loss of individuality when assimilated is "worse than dying", the trio choose the option to live a mere few weeks as free individuals, rather than a lifetime within the Borg collective.

5.3 The Borg as Unstoppable Technology

Star Trek: The Next Generation episode "Parallels" has a brief, but provocative scene involving another *Enterprise* which had appeared via a spatial anomaly from an alternate universe. To restore normality and prevent a disaster from the spatial rift, the alternate *Enterprise* must return to the universe it originated from. A hail appears on the viewscreen of the main *Enterprise*. We are confronted with the familiar *Enterprise* crew but clearly disheveled, the bridge filled with smoke, and the ship severely damaged.

> ALTERNATE RIKER: We won't go back! You don't know what it's like in our universe. [explosions within the ship] The Federation is gone! the Borg is everywhere! We're one of the last ships left. Please!
> [A look of deep desperation can be seen on alternate Riker's face as he pleads]
> ALTERNATE RIKER: You've got to help us!
> MAIN RIKER: I'm sorry. There's no choice. If this works, everything will return to--
> ALTERNATE RIKER: NO! We won't go back!

The alternate *Enterprise* opens fire and forces the main *Enterprise* to defend itself, completely annihilating the severely damaged vessel. Here, the crew of the alternate *Enterprise* being pushed to such desperate extremes gives strong evidence to support the interpretation of Borg as symbolizing technology so powerful and advanced as to become unstoppable.

As Cocroft and Thomas (2003) detailed, a major part of the tensions of cold war era arms race was the fear of one faction developing technological military superiority to the point of becoming unstoppable. This level of superiority of military technology is directly

expressed by the Borg in *Star Trek: The Next Generation* “Q Who” as the *Enterprise* attempts to flee from the pursuing Borg cube:

> WORF: The Borg are still gaining!
> Q: They will follow this ship until you exhaust your fuel, they will wear down your defenses. Then you will be theirs. Admit it, Picard, you're out of your league!
> PICARD: Fire the photons [torpedoes]
> [We see the Enterprise firing a full spread of photon torpedoes. All impact the Borg ship, yet no damage is inflicted on the vessel].
> WORF: The Borg ship was not damaged
> Q: You can't outrun them. You can't destroy them. If you damage them, the essence of what they are remains -- they regenerate and keep coming. Eventually you will weaken -- your reserves will be gone... they are relentless.

The desperation of fighting such a technologically advanced enemy is driven home in *Star Trek: The Next Generation* “Best of Both Worlds: Part 2” and *Star Trek: First Contact*. The plots of both of these involve a single Borg cube vessel attacking the United Federation of Planets. Before the upcoming battle in *Star Trek: First Contact*, Captain Picard dictates his thoughts into the ships log:

> PICARD: "The moment I have dreaded for nearly six years has finally arrived. The Borg, our most lethal enemy, have begun an invasion of the Federation. And this time, there may be no stopping them." (*Star Trek: First Contact*)

In both cases, the federation musters a large fleet for defense, with a confirmed 40 ships in the first battle at Wolf 359 in “The Best of Both Worlds”, and what appears to be similar numbers in the final defense of Earth in *Star Trek: First Contact*. Everything from the Federation’s most powerful capital ships to science vessels and exploration ships were added to the fleets as a desperate last-ditch effort. What ensues in both battles is the Borg vessel using its adaptability and technological superiority to decimate the defending fleets, smashing though the Federation defenses while taking minimal damage in the process. The presentation of the Borg in this manner supports the notion of the Borg being an embodiment of the cold war fears of unstoppable military technology as detailed by Cocroft and Thomas (2003). Additionally, it lends further credence to the

interpretation of the Borg as an embodiment of the conservative fears still prevalent in the political climate during their conception, including many aspects of the American establishment's distrust and fear of socialism.

6 BORG AS THE UNNATURAL

In the theory section, I have explored the theory of the natural in relation to technology and the social value given to what is seen as a natural way of life in society. This included the importance given to traditional bedrock ideals in western ideology such as liberty and meritocracy and promoting the value of the individual. I also explored how science fiction narratives can exhibit values seen as disruptive to the natural order and counter to these cherished values. All societies do, to some extent, subjugate the individual to the common purpose, usually referred to as 'the common good'. The question is at what point in a technological society, does this subjugation infringe so much upon individual freedoms as to become totalitarian in nature. Applying this theoretical material, the task is now to search for evidence of these kinds of technophobic themes, embodied within the Borg, which are expressed in a way that is strongly connected to the technological essence of their society. Some of what is analyzed is the amalgamation of techno and phobia in the most basic sense. For example, a situation where a more common kind of powerful fear of something - such as insects or deadly viruses - is manifested via technology into something that resembles these things so closely as to become analogous, evoking the same powerful emotions of fear.

It is worth noting at this point how an important element of the presentation of the Borg as unnatural and unpleasant on a fundamental level is achieved via audiovisual theming. With the initial introduction of the Borg in *Star Trek: The Next Generation* "Q Who"[17] when the Borg are first encountered, there is an eerie backing soundtrack with an unnerving, fast-paced binary base melody in its background. This is interspersed with sudden strings of an odd, guitar-like yet strangely discordant metallic sound which somehow brings to mind industrial machinery and the echoes one can hear when sound reverberates within the bowels of large, metallic (artificial) structures. This is a sound which would become inexorably linked to the Borg and featured again in later Borg

[17] While "Q Who?" featured the introduction of the Borg, it is worth noting that the much later ENT Season 2, Episode 23 "Regeneration" featured the Borg appearing on Earth, its events takings place in the year 2153, *chronologically* far before the events of "Q Who".

encounters, most notably in *Star Trek: First Contact* when the Borg vessel first appears on the screen. This aural construction underlines the tension and anxiety of such an alien encounter, and partly via this sound design, even before the audience learns anything about this unknown alien race, they are immediately put on edge and given an unnerving premonition of something unpleasant being encountered.

6.1 Borg and the Natural Order

As Ryan and Kellner (1990) write, science fiction involving fears of technology may exhibit technology as representing something counter to established social hierarchies and destructive to the natural order. Technology here acts as the vehicle that forces us to directly confront and experience the unnatural. Thus, these types of narratives are technophobic because they force us to not only confront the unnatural via advanced technology but also because they force the unpleasant issue of questioning well established, yet often surprisingly vague notions of the natural and natural order.

The initial impression of the physical appearance of the Borg drones themselves is one that is distinctly unnatural and wretched. In addition to the horrifying implantations, prosthetics and wiring embedded within their flesh, most drones are completely hairless and are characterized by clammy, almost translucent pale skin. The tightly fitted, rigid bodysuits add the finishing touches to the painful and unpleasant image of what existence as a Borg drone must be. It is quite possible that Borg drones are in constant pain from these alterations, but since they have no free will, they simply lack the means to express their discomfort or to do anything about it. The eerie nature of the drones themselves is enhanced by the functional, sterile, industrial-like interiors of their ships, which create a pervasive feeling of being trapped within a giant mechanism. The Borg vessels are dark and gloomy with a hazy undefined mist hovering in every section. Brightly strobing lights dot the walls, zapping of dangerous-sounding electrical discharges fill the air, the lighting inside composed almost exclusively of a sickening neon-green glow. All these elements create an unsettling atmosphere which is familiar in many ways but unsettling in a manner

which is difficult to name or define exactly. All of this functions in setting the stage that the technophobic Borg are built upon in *Star Trek*.

As noted earlier, individual Borg are referred to as 'drones', with each drone being essentially equal in value, with tools and prosthetics grafted for whatever task they are currently assigned to. The drones have no unique names but instead are given purely functional designations, such as "Seven of Nine, Tertiary Adjunct of Unimatrix 01". In *Star Trek: The Next Generation* "Q Who", the audience is provided with their first introduction to the Borg cybernetic society. Shortly after an initial skirmish with the Borg cube, the crew of the *Enterprise* decide to beam aboard the vessel and explore its interior. They discover that the ship is filled with long hallways containing thousands of uniform alcoves filled with Borg drones.

> RIKER: There are slots all along the wall, kind of like compartments, there are two Borg in each one.
> [The crew seem puzzled by this strange mode of operation]
> DATA: Captain, I would theorize that the Borg are somehow interconnected through these slots and are working collectively.
> [The drones are motionless, with only their implants occasionally blinking and buzzing to show signs of activity.]

Each drone is encased in a body suit and filled with tubes and implants. Many have mechanical arms and ocular implants. Every drone shows enough distinguishing features that the audience (and the exploring crew) can see what race it originally belonged to. The crew turn around and look into the massive interior of the ship. The view is striking. As the camera slowly pans out, the innards of the gigantic ship come into view and we see that there are countless more hallways filled with thousands of drones and an endless number of indistinguishable alcoves. The crude, comfortless industrial interior of the ship is equally cold and uninviting. While the implants of each drone are tailored to its specific tasks, the uniformity of the drones in their endless rows of alcoves is dramatically apparent.

Picture 4. The interior of a Borg cube vessel, with thousands of uniform alcoves where the Borg operate from (*Star Trek: The Next Generation* "Q Who*"*)

The crew examine the networked drones:

> DATA: The technology required to achieve this biological and artificial interface is far beyond our capabilities. There are many advantages.
> RIKER: Speed being the obvious one. This ship literally just *thinks* what it wants to do, and it happens.

There is evidence here of a parallel to the themes examined in *THX 1138* (1970). Riker's comment shows how in the Borg collective existence there are clear benefits, a type of strength with prosperity and efficiency in a mindless unity. The discovery of this mode of existence strikes the crew as something truly unusual and they see it as unnatural and perplexing. This echoes the kind of valorization of individuality over collectivity and socialism apparent in the story of the THX character. Separation of the individual from the mass is seen as a return to the natural order of existence.

As detailed earlier, Ryan and Kellner (2002) established a theme common to both *THX 1138* (1970) and *Logan's Run* (1976). This was to always establish a very stark contrast or "…opposition between terms (liberty vs equality) that does not permit intermediation" (Ryan & Kellner 1990: 59). A scene from *Star Trek: Voyager* "Scorpion (part I)" reflects this kind of harsh contrasting:

> JANEWAY [Quoting a report by Captain Picard of the *Enterprise*]: 'In their Collective state, the Borg are utterly without mercy... Driven by one will alone: the will to conquer. They are beyond redemption. Beyond reason.' (*Star Trek: Voyager* "Scorpion (part I)")

Picard's statement presents the Borg as a striking expression of this kind of dramatic juxtaposing, as they become extreme manifestations of equality being counter to the values of liberty. The Borg also have no homes, no attachment to places and no families. They embody the conservatist visions of ruin identified by Ryan and Kellner (2002) when social hierarchies and the doctrinal 'natural order' cease to exist because of technology that is seen as ruinous to these values. In the case of the above comment by Picard, the effect is seen taken to an extreme where the resulting society has all morality completely eroded, wiping out the values of liberty and justice.

6.2 The Post-human Borg

"Watch… Your future's end"
(Borg queen in *Star Trek: First Contact*)

Much of the representational value of the Borg as post-human or anti-human seems to derive from a symbolic embodiment of fears of losing control over powerful technology, to the point of it overtaking and suppressing its creators. Part of this is the idea that technology might eventually replace humans entirely. The technologically fused Borg society presents an image which displays such technological post-humanist notions. In *Star Trek: The Next Generation* "Q Who", a foreshadowing scene begins the episode:

> [An ensign crew member is seen at a food dispensing replicator]
> ENSIGN: Hot chocolate, please.
> GEORDI: [chuckling] We don't ordinarily say please to food dispensers around here.
> ENSIGN: Well, since it's listed as intelligence circuitry, why not? After all, working with so much artificial intelligence can be de-humanizing

Here, there is an initial indication of the theme of the de-humanizing effects of advanced technology, and also the possibility of losing our humanity when our lives are embedded in such technology.

6.2.1 Borg and the Cycle of Life

The Borg are antithetical to the natural cycle of life in at least two ways which are manifested via technology. The first form of the Borg clashing with the natural cycle of life is encountered in *Star Trek: Enterprise* "Regeneration". In the episode, the wreckage of a Borg sphere ship is discovered in Earth's arctic circle[18]. The excavation uncovers multiple drones, frozen for a hundred years, their biological parts long dead, but preserved in the ice. The drones are recovered and placed in warm storage. Within hours, they begin to twitch and show signs of life, and soon the technology and nanomachinery inside the drones resurrects them, apparently fully restoring them to life and back to functional drones. This kind of unnatural preservation draws a clear parallel with classic 'zombie' themes. Here, the dead Borg rising from the dead evokes many of the same unpleasant emotions and horrified reactions of encountering the walking dead zombies in such narratives. In the same vein, the risen Borg prove extremely tough to kill, just as a risen zombie that keeps shambling forth despite massive damage to its body. The Borg transpose this zombie concept to a futuristic setting, becoming an incarnation of 'techno-zombies'.

In *Star Trek: The Next Generation* "Q who?" there is evidence of this 'techno-zombie' theme expressed in another form. After a firefight between the *Enterprise* and the Borg

[18] The wreckage of the time-travelling Borg sphere destroyed by *The Enterprise* in *Star Trek: First Contact.*

cube, the Borg vessel is shown to have taken massive damage to the hull, with large sections missing from the vessel. The away team is exploring the vessel and make a discovery:

> DATA: Commander, the ship appears to be -- regenerating.
> RIKER: The Borg seem to be using their combined power to repair the ship.

The camera changes to an outside view of the cube, and is zoomed onto a previously destroyed section of the ship. Though made of metal and alloys, the ship is shown to be physically regenerating. Gaps are seen sealed, bulkheads move into place and the vessel is shown re-forming the hull, in a similar fashion to an organic wound healing itself. Here the unnatural regenerative capacity of the drones themselves is displayed in their ships as well, echoing Kelly's (2010) comments on how technology is unnatural because of the ability to self-sustain and essentially exists forever.

Further evidence of this theme can be seen in *Star Trek: Voyager* "Mortal Coil". In the story, one of the crew members, Neelix, is struck by an energy burst while on a mission and instantly killed. He is dead for a total of 18 hours. Then Seven of Nine uses her knowledge of Borg nanotechnology to inject nanites into Neelix's body, reversing the necrosis of his cells and bringing him back to life. Coming to terms with the fact that Borg technology is keeping him alive proves difficult for Neelix:

> NEELIX: I don't really like the idea of Borg technology swimming around inside me.
> SEVEN: That is irrelevant. You need the nanoprobes to live.
> NEELIX: Live? Oh, is that what I am doing right now? Living? I'm beginning to wonder.
> SEVEN: By most definitions you are alive.
> NEELIX: Well, part of me isn't alive.

Neelix's crisis deepens as he recalls the memories of his experience:

> NEELIX: I died. And there was nothing. There was no-one there. No forest.
> CHAKOTAY: Forest?
> NEELIX: The Great Forest. The afterlife. I was taught that when I died my ancestors would be there, waiting for me by the Guiding Tree. My sisters, my mother and father, my cousins. Everyone who was killed in the war. I took

> great comfort in knowing that we'd all be together again one day. But it's not true.
> CHAKOTAY: Maybe we pulled you back before any of that could happen.
> NEELIX: No. I was dead for eighteen hours. I should have experienced something, should remember something. It's just a story, a myth. There is no Guiding Tree. No gathering of the ancestors.

Here the unnatural method of resurrection with technology causes an existential crisis that forces him to question every aspect of his expectations and beliefs of the cycle of life and death.

6.2.2 Sanctity of Life

In *Star Trek: The Next Generation* "Q Who" during the first contact conflict with the Borg, a drone beams aboard the *Enterprise* and begins scanning the ship, disrupting operations. The crew manage to gun down the drone. A second drone beams in within moments, already adapted and immune to the crew's weaponry, and completes some more scans of the ship. Not only does it initially pay no heed to its fallen comrade, but once it has finished its scans, the drone leans over and pulls out components from the dead drone, scavenging it for useful tech in a rather gruesome fashion. Immediately after, the fallen drone completely disintegrates. Every drone is outfitted with this type of self-destruct mechanism to keep Borg technology from falling into enemy hands. This indicates a complete lack of consideration given to the deceased, and a purely pragmatic approach to disposal of the dead.

In the Borg collective, each individual is part of a collective consciousness. When a drone dies, its memories and experiences are not lost, but instead continue to live on inside the collective consciousness. This system and its existential implications are perfectly illustrated in *Star Trek: Voyager* "Mortal Coil" in a conversation between Seven of Nine (a former Borg drone) and *Voyager*'s Vulcan security officer, Tuvok:

> SEVEN OF NINE: Human attitudes toward death are perplexing.
> TUVOK: How so?

> SEVEN: Too much importance is placed on it. There seem to be countless rituals and cultural beliefs designed to alleviate their fear of a simple biological truth: all organisms eventually perish.
> TUVOK: I take it the Borg have no fear of that biological truth?
> SEVEN: None. When a drone is damaged beyond repair, it is discarded. But its memories continue to exist in the collective consciousness. To use a human term, the Borg are immortal.
> TUVOK: You are no longer part of the Collective. You are mortal now like the rest of us. Does that disturb you?
> SEVEN: My connection to the Borg has been severed. But the Collective still possesses my recollections, my experiences. In a sense, I will always exist.
> TUVOK: Fascinating. That must be a great relief.
> SEVEN: [reflective] Yes. It is.

This conversation shows that the Borg have no burial rituals or value given to a life. This kind of disregard for the individual flies in the face of established values of most major religions, most notably Christianity, as how can one achieve salvation when there is no value such as 'spirit' or 'soul' applied to individuals? The treasured human communal and personal memory of a person becomes devalued, as instead the Borg achieve technological pseudo-immortality within the collective memory. For the Borg, no value is given to dead individuals, and the only trace of a person left behind is their stored data.

The storyline of *Star Trek: Voyager* "Unimatrix Zero" features a number of drones scattered across the collective, who have a sporadically occurring, recessive mutation. This mutation allows these drones to recover and access their individuality during their regenerative (sleep) phases, forming a virtual mini-collective resistance within the Borg. Only one Borg in a million has this mutation. The following dialogue takes place between the Borg queen and Captain Janeway of the starship *Voyager* (who assisted the burgeoning resistance):

> CAPTAIN JANEWAY: The resistance is already underway. It won't be long before thousands of drones begin to fight back.
> BORG QUEEN: They will fail.
> JANEWAY: Maybe. Probably. But a lot of damage will be done before they do.
> QUEEN: Yes. [shifting her tone] A lot of damage.
> [The queen brings up a viewscreen showing a Borg cube]
> QUEEN: Cube 6-3-0. Complement sixty-four thousand drones. But I can no longer hear three of them. No doubt they've joined your resistance. Are they

> trying to sabotage the vessel and liberate others? I don't know… [agitated] Because I can no longer hear them.
> QUEEN: Initiate self-destruct.
> [The vessel on the viewscreen explodes killing every drone on board]
> QUEEN: An effective solution, don't you agree?

This theme is echoed *Star Trek: The Next Generation* "I, Borg", in a scene where the *Enterprise* crew are talking with the recently rescued Borg drone:

> BORG DRONE: "What is a doctor?"
> CRUSHER: "A doctor heals the sick, and repairs the injured"
> BORG DRONE: "The sick and injured are reabsorbed. Others take their place"

These scenes build a profile that clearly exhibit the Borg's callous, utilitarian attitude towards individual drones, and a willingness to sacrifice large numbers of their own with zero sentiment. Drones are simply and efficiently disposed of when dead or no longer useful to the collective. Spirituality or religion do not exist in the technological collective. This is in direct contrast to the value and reverence afforded to the individual in most human societies and cultures.

In human military conflicts, there is a common expectation that the enemy will withdraw from a hopeless battle, wishing to avoid massive loss of personnel. As Cocroft and Thomas (2003) discuss, in the context of the cold war arms race this was encapsulated in the concept of 'mutually assured destruction'. Neither side would risk conflict due to the expected outcome of massive losses on both sides. But how is it possible to fight an enemy who ignores losses and displays no imperative towards preservation of individuals or equipment? The technological juggernaut the Borg represent runs counter to these fundamental doctrines of war, making the notion of facing them in battle a truly fearsome proposition.

6.3 Borg as the 'Uncategorizable Unnatural'

As Wertheim (2002) commented, the Borg embody aspects of technophobia which are difficult to categorize and place under the context of other analyses. The allusion of insect-like and virus-like characteristics in particular warrant a closer examination. These aspects will be analyzed here separately, but still broadly fall under the category of Borg as the unnatural.

6.3.1 Insect-like Aspect

The Borg are described in many *Star Trek* episodes as having a hive mentality, existing in insect-like hives with a single-minded task focus, led by a single Borg queen. The similarities to the insect world noted by Wertheim (2002) are unmistakable. The first clear evidence of this is the naming convention adopted. Much like in a bee hive, the workers of the Borg are referred to as "drones". Similarly, the choice of naming the Borg leader the queen is a clear indication of building upon the beehive comparison.

The second indication of insect-like characteristics can be seen in the conversation between the *Enterprise* away team members, as they explore the Borg cube for the first time:

> RIKER: Like a juggernaut, it could begin moving at any moment.
> [Suddenly, a Borg drone approaches the exploring crew, but to their surprise takes no action, and simply ignores them, continuing to its alcove]
> DATA: [Clearly surprised] Fascinating.
> RIKER: They either don't see us, or don't see us as a threat.

The comparison can be drawn here between how the Borg drones behave and how an ant nest which will ignore close-by animals until they step on the nest. The Borg simply ignore anything that is not a threat or impediment to their goals as they go about their individual tasks.

More evidence of the insectoid inspiration for the Borg collective is how they send countless numbers of scouts around space. These will initially ignore ships and planetary

civilizations they meet. That is, until they find some technology or a species they deem useful to assimilate. When a scouting bee finds a good source of nectar, it returns to the hive and communicates it to the other drones. Then, the hive sends a large number of bees to harvest these rich resources. The collective is confirmed to function in a similar manner in *Star Trek: The Next Generation* "Q who" in a conversation after the initial contact with the Borg:

> RIKER: Guinan, if they were that aggressive, why didn't the Borg attack? They could have -- but they didn't.
> GUINAN: They don't do that individually. That's not their way. When they decide to come, they're gonna come in force. They don't do anything piecemeal.
> DATA: Then the initial encounter was solely for the purpose of gathering information?
> GUINAN: Yes.

Furthermore, Borg ships are shown to be able to keep functioning even if huge sections of the ships are destroyed, and their crews decimated:

> SHELBY: "Projections suggest that a Borg ship like this one [a Borg cube] could continue to function effectively even if 78% of it was inoperable" (*Star Trek: The Next generation* "The Best of Both Worlds")

The Borg can recover and regenerate after catastrophic damage and losses. This is analogous to how an insect hive can keep functioning and rebuild after substantial damage. This provides the final element to confirm the intentional choice of presenting these features to create an image of the Borg as techno-insects, their technological society functioning in such a way as to elicit the same feelings of fear and loathing towards insects which are common phobias for great numbers of people.

6.3.2 Virus-like Aspect

On several occasions, descriptions of how the Borg society propagates and assimilates other lifeforms seem to display allusions of virus-like characteristics. In *Star Trek: Voyager* "Scorpion (part I)*"* the doctor of *Voyager* examines a Borg corpse along with

his assistant Kes, and analyzes the nanoprobes found in the injection tubules of the severed Borg arm:

> [A computer monitor displays a microscopic view of healthy human blood cells]
> DOCTOR: [Holding up the Borg arm] These injection tubules are the first step in the Borg assimilation process. Once inside the skin, they release a series of nanoprobes into the bloodstream.
> DOCTOR: The tubules are capable of penetrating any known alloy or energy field. Which means our battle must be waged inside the body itself.
> DOCTOR: The first tissue to be attacked by the nanoprobes is the victim's blood...
> [On the graphic, we see a cell-sized Borg nanoprobe race into view. It attaches to a blood cell, and in a frightening chain reaction all of the blood cells are 'Borgified', turning dark-green and becoming distorted]
> DOCTOR: Assimilation is almost instantaneous.
> KES: [Studies console] They take over the blood-cell functions... like a virus.

This shows how there is a clear parallel drawn with the process of nano-assimilation and that of a viral infection attacking and destroying cells. This is also illustrated in *Star Trek: First Contact*. As the Borg begin to take over the *Enterprise* and assimilate its crew, the remaining crew gather in the armory and prepare to mount their defense of the ship. Before they head out, Captain Picard delivers an austere warning:

> PICARD: One other thing… You may encounter Enterprise crewmembers who've already been assimilated. Don't hesitate to fire. Believe me you'll be doing them a favour.

Here it is evident, considering the assimilation process, that assimilated crew members are perceived similarly to people infected with terminal diseases or carriers of a lethal plague, with the ending of their lives effectively 'putting them out of their misery'.

7 CONCLUSIONS

In this thesis, I have studied the Borg collective in *Star Trek,* exploring how they embody technophobia in science fiction. The goal was to analyze Borg related scenes for evidence of the Borg as embodying technophobia, organized within the categories of 'self and other', and as representational of the unnatural.

Immediately upon examining the Borg it became clear how aspects of the presentation of the Borg ships, physical appearance, living environments and demeanor were designed to be unpleasant on a very fundamental and psychologically basic level. Analysis showed clear evidence that Borg were intentionally presented as frightening in their suppression of the highly valued identity of self via the technological assimilation process. The assimilated Borg individual becomes something that is alien and fundamentally unpleasant, transformed into *the other*, a cybernetic techno-antagonist.

The second category of focus explored technophobia and the Borg through the lens of the Borg Collective as embodying the unnatural. Analysis showed clear thematic parallels with other technophobic films which presented advanced technology as something unnatural and disruptive to social order. Further inspection showed the presentation of the Borg to embody conservatist notions prevalent during their conception. On the one hand they are a palpable representation of cold war era arms-race fears of unstoppable technology. On the other hand, the Borg negatively affirm socialist values of collectivity and uniformity. The society of the technological Borg collective is presented as a metaphor for everything that is suppressive to liberty and the natural order of society.

Borg technology is shown to also be unnatural in its ability to resurrect and sustain dead individuals, presenting them as a type of 'techno-zombies'. Additionally, there is clear evidence of the Borg society being analogous in behavior and organization to insects, designed to provoke many of the same unpleasant reactions people have toward them. A similar parallel can be drawn with the Borg assimilation process and a deadly virus infection, with attitudes towards the infected showing striking similarities.

It became clear in the process of analysis that what makes the Borg a technophobic embodiment stems in one part from their physical integration with technology on every level of society, from organic cell to drone to hive. The other part of their representational value is as symbolic nemesis, a culmination of unease towards technological progress and uncontrollable, unstoppable technology slipping out of our control and eventually annihilating us.

These examinations brought to light the underlying, embedded yet often hidden indoctrinational ideologies behind the notions of the 'natural' and 'the natural order'. Analysis also shone a light on the inherently contradictory nature of the ideology of the natural in that its very definition relies on the existence of its counterpoint of technology as the unnatural. When exploring technophobia and the Borg Collective from the aspect of them being representative of 'the other', it forced a processing of the concept itself. Defining the *other* necessitates first defining *self* and through that process of definition, realizing and itemizing the social and psychological structure upon which identity and self are constructed, both on a personal and collective level.

I believe that more in-depth understanding of the fears of technology embodied by the Borg and the issues raised by the exploration of said fears can be applied to future studies of technophobia and how they are expressed in science fiction. It is public awareness of and intervention in technological development which will determine our future. This is why I believe that the fears of technology embodied by the Borg and the issues raised by the exploration of those fears can be an important influence for positive socio-technological progress. These explorations strengthen the basic argument that without awareness of technology and its effect on society there can be no oversight. This emphasizes the crucial role of popular media, for example via the chosen subject of this thesis, *Star Trek*'s cybernetic society of the Borg, in stimulating public awareness and debate with its ability to reach a wide and diverse audience.

WORKS CITED:

Primary sources:

Regeneration. Star Trek: Enterprise. Rick Berman & Brannon Braga, David Livingston, Mike Sussman & Phyllis Strong, Scott Bakula, John Billingsley, Jolene Blalock. United Paramount Network. (2003).

Star Trek: First Contact. Dir. Jonathan Frakes. Writers Gene Roddenberry, Rick Berman, Brannon Braga, Ronald D. Moore. Patrick Stewart, Jonathan Frakes, Brent Spiner, LeVar Burton, Michael Dorn, Gates McFadden, Marina Sirtis, Alfre Woodard, James Cromwell, Alice Krige. Digital Image Associates. [DVD] Paramount Pictures. (1996).

Star Trek: The Next Generation. Seasons 1-7. Gene Roddenberry & Rick Berman, Patrick Stewart, Marina Sirtis, Jonathan Frakes, Brent Spiner & Gates McFadden. Paramount Domestic Television. (1987-1994).

Star Trek: Voyager. Seasons 1-7. Rick Berman & Michael Piller, Kate Mulgrew, Robert Beltran, Roxann Dawson, Jennifer Lien, Robert Duncan McNeill. United Paramount Network. (1993-1999).

Secondary sources:

Batchelor, David Allen (2017). *The Science of Star Trek*. National Aeronautics and Space Administration technology articles. [Cited 23 march 2017]. Available at: https://www.nasa.gov/topics/technology/features/star_trek.html

Benford, Gregory (1987). Effing the Ineffable. In: George E. Slusser & Eric S. Rabkin (eds.) *Aliens: the anthropology of science fiction.* Carbondale: Southern Illinois University Press. 23-33.

Brosnan, Mark J. (2003). *Technophobia: The Psychological Impact of Information Technology*. New York: Routledge.

Cellan-Jones, Rory (2016). *Stephen Hawking - will AI kill or save humankind?* BBC Technology. 20th October, 2016. [Cited 23 march 2017]. Available at: http://www.bbc.com/news/technology-37713629

Csicsery-Ronay Jr., Istvan. Futuristic Flu, or, The Revenge of the Future. In: George Slusser and Tom Shippey (eds.) *Fiction 2000: Cyberpunk and the Future of Narrative*. Athens: Georgia University Press. 26–45.

Collins, Samuel (2008). *All Tomorrow's Cultures: Anthropological Engagements with the Future*. New York: Berghahn.

Cornea, Christine (2007). *Science Fiction Cinema Between Fantasy and Reality*. Edinburgh University Press.

Dinello, Daniel (2005). *Technophobia!: science fiction visions of posthuman technology*. University of Texas Press.

Gillies, Andrea (2010). *Keeper: One House, Three Generations and a Journey into Alzheimers*. New York: Broadway.

Happer, Catherine & Greg Philo (2013). The Role of the Media in the Construction of Public Belief and Social Change. *Journal of Social and Political Psychology* 1: 1, 321-336.

Hillman, Neil Martin Georges (2017). *A new sound mixing framework for enhanced emotive sound design within contemporary moving-picture audio production and post-production*. Volume 1 of 3. PhD thesis. University of York Theatre. Film and Television.

Hollinger, Veronica (2014). Genre vs. Mode. In: Latham, Rob (ed.). *The Oxford Handbook of Science Fiction*. New York: Oxford University Press. 139-154.

Jakubowski, Maxim and Malcolm Edwards (1983). Twenty Definitions of Science Fiction. *The SF Book of Lists*. New York: Berkley. 256–58.

Kaku, Michio (2011). *Physics of the Future.* Kindle edition. New York: Doubleday.

Kelly, Kevin (2010). *What Technology Wants*. Kindle Edition. New York: Viking.

Khasawneh, Odai Y. (2018a). Technophobia without boarders: The influence of technophobia and emotional intelligence on technology acceptance and the moderating influence of organizational climate. *Computers in Human Behavior* 88: November 2018, 210-218.

Khasawneh, Odai Y. (2018b). Technophobia: Examining its hidden factors and defining it. *Technology in Society* 54: August 2018, 93–100.

Kuhn, Annette (1990). *Alien Zone: Cultural Theory and Contemporary Science Fiction Cinema*. London: Verso.

Landon, Brooks (2014). Extrapolation and Speculation. In: Latham, Rob (ed.). *The Oxford Handbook of Science Fiction*. New York: Oxford University Press. 23-34.

Le Guin, Ursula K. (1979*) The Language of the Night: Essays on Fantasy and Science Fiction*. Ed. Susan Wood. New York: G.P. Putnam's Sons.

Levinas, Emmanuel (1984). Ethics of the Infinite. In: Kearney, Richard (ed.) *Dialogues With Contemporary Continental Thinkers: The Phenomenological Heritage.* Manchester: Manchester University Press.

Malmgren, Carl D. (1993). Self and Other in SF: Alien Encounters. *Science Fiction Studies* 20: 1, 15-33.

Mead, George H. (1972). *Mind, self, and society from the standpoint of a social behaviorist.* Chicago: University of Chicago Press.

Melzer, Patricia (2010). *Alien constructions: Science fiction and Feminist Thought*. Texas: University of Texas Press.

Nagoshi, Julie L, Craig T. Nagoshi & Stephan/ie Brzuzy (2014). *Gender and Sexual Identity: Transcending Feminist and Queer Theory.* London: Springer publishing.

Onbelet, Lisa (1999). *Imagining the Other: The Use of Narrative as an Empowering Practice.* [Cited 23 may 2018]. Available at: https://www.mcmaster.ca/mjtm/3-1d.htm

Robb, Brian J. (2012). *A Brief Guide to Star Trek*. London: Running Press.

Ryan, Michael & Douglas Kellner (1990). Technophobia. In: Kuhn, Annette (ed.) Alien Zone: Cultural Theory and Contemporary Science Fiction Cinema. London: Verso. 58-65.

Sardar, Ziauddin (2002). Introduction. In: Sardar, Ziauddin & Sean Cubitt (eds.) (2002). *Aliens R Us: The Other in Science Fiction Cinema*. London: Pluto Press. 1-19.

Sardar, Ziauddin and Sean Cubitt (eds.) (2002). *Aliens R Us: The Other in Science Fiction Cinema*. London: Pluto Press.

Steinvorth, Ulrich (2009). Rethinking the Western Understanding of the Self. New York: Cambridge University press.

Suvin, Darko (1979). *Metamorphoses of Science Fiction.* New Haven: Yale University press.

Triandafyllidou, Anna (1998). National identity and the 'other', *Ethnic and Racial Studies*, 21:4, 593-612.

UNESCO (1998). Conference held 1st-3rd November 1998. *The Role of Science and Technology in Society and Governance*. Toward a New Contract between Science and Society. Executive summary. Available at: http://www.unesco.org/science/wcs/meetings/eur_alberta_98_e.htm

Verba, Joan Marie (2003). *Boldly Writing: A Trek Fan and Fanfiction History*. CreateSpace Independent Publishing Platform.

Wertheim, Christine (2002). Star Trek: First Contact: The Hybrid, the Whore and the Machine. In: Sardar, Ziauddin & Sean Cubitt (eds.) (2002). *Aliens R Us: The Other in Science Fiction Cinema*. London: Pluto Press. 74-93.

Wolf-Meyer, Matthew J. (2019). *Theory for the World to Come: Speculative Fiction and Apocalyptic Anthropology*. Minneapolis: University of Minnesota Press.