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Soul Searching: an exploration of the relationship between technology and the soul through the interpretation of contemporary visual culture

by

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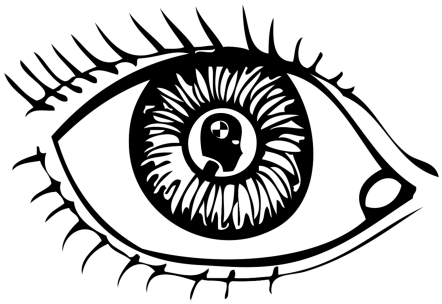

ABSTRACT AND KEY TERMS

This study aims to critically analyse the contemporary relationship between the concepts of the soul and technology, with reference to the manner in which the relationship is represented in selected examples of visual culture, most notably film, photography and artworks. The relationship between the soul and technology is explored by expanding the framework provided by psychiatrist Alison Gray (2010:638), where she identifies three main categories when dealing with the soul. The three categories are namely dualism as found in the gnostic approach, monism as it manifests in the animistic approach, and finally the physicalist approach. Gray (2010:638) considers these three approaches as amongst the most common worldviews in contemporary society, thus these provide a diverse yet comprehensive manner for interpreting current notions of the soul and technology. Essentially, Gnosticism is based on various religious beliefs and principles that express a negative attitude towards earthly and material existence (Hoeller 2012). Animism, in turn, maintains that the lifeless has life, spirit and soul, and therefore provides characteristics of living things to inanimate things and events (Hornborg 2006:1). Finally, physicalism asserts that there is nothing more to the world than what can be scientifically and empirically observed (Pettit 1993:222). These three categories' approaches to the soul and technology differ, but, as becomes evident in the analysis, these also overlap in parts, which means the analysis of the selected visual examples differ and overlap accordingly.

Key terms: technology; the soul; visual culture; Digital Age; monism; dualism; physicalism; gnosticism; animism; film; photography; artworks.

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PLAGIARISM DECLARATION

Student number: 10317083

I hereby declare that *Soul Searching: an exploration of the relationship between technology and the soul through the interpretation of contemporary visual culture* is my own work and that all sources that I have used or quoted have been indicated and acknowledged by means of complete references.

Karli Brittz
10 April 2016

CHAPTER ONE
HEART AND SOUL: INTRODUCTION

We have the beginning of a new age.
The earth gets a new skin.
Better still it finds its soul.
- Pierre de Chardin

This study aims to critically analyse the contemporary relationship between the concepts of the soul and technology, with reference to the manner in which the relationship is represented in selected examples of visual culture, most notably film, photography and artworks. The relationship between the soul and technology is explored by expanding the framework provided by psychiatrist Alison Gray (2010:638), where she identifies three main categories when dealing with the soul. The three categories are namely dualism as found in the gnostic approach, monism as it manifests in the animistic approach, and finally the physicalist approach. Gray (2010:638) considers these three approaches as amongst the most common worldviews in contemporary society, thus these provide a diverse yet comprehensive manner for interpreting current notions of the soul and technology. Essentially, Gnosticism is based on various religious beliefs and principles that express a negative attitude towards earthly and material existence (Hoeller 2012). Animism, in turn, maintains that the lifeless has life, spirit and soul, and therefore provides characteristics of living things to inanimate things and events (Hornborg 2006:1). Finally, physicalism asserts that there is nothing more to the world than what can be scientifically and empirically observed (Pettit 1993:222). These three categories' approaches to the soul and technology differ, but, as becomes evident in the analysis, these also overlap in parts, which means the analysis of the selected visual examples differ and overlap accordingly.

Over recent years (2011-2016) humanity has witnessed soul-stirring events ranging from the launch of self-driving vehicles to airplanes that disappeared without a trace. The film industry has also overwhelmed movie-goers with thought-provoking films portraying everything from intimate relations with operating systems, to spiritual growth on a space station. *TIME* magazine covers during this period (Figures 1-9) illustrate these events and in general present spirituality and technology sharing world headlines, while impacting humanity and manifesting in visual culture and visual examples (Klenke 2010:235). For instance, the cover

of February 2014 (Figure 6) introduces the *Infinity Machine* which can solve "humanity's most complex problems" and yet "nobody knows how it actually works" indicating the current autonomic nature of technology, as well as the introduction of technology to solve ontological problems. September 2013's cover (Figure 1) places an important technological invention of the Digital Age,[1] namely the Google search engine, alongside the ontological phenomenon of death, which is usually more commonly associated with spirituality than technology. Moreover, the cover introduces the possibility that this technology could be a solution to mortality (a concept often closely linked to the soul and the transcendent). These observations confirm Bainbridge's (2006:28) suggestion that the soul is delicately and skillfully intertwined into the technological framed world, thereby "redefining the soul as a dynamic, nonmaterial system of information". As more types of these phenomena are experienced, it has become clear to me that there is a great need for some 'soul searching' within our technological age. Accordingly, an investigation into the contemporary relationship between the concepts of the soul and technology, with reference to the manner in which the relationship is represented in selected multimodal visual examples, follows.

[1] The 'Digital Age' is the term commonly used to describe the time period, which started in the 1970s with the invention of the first personal computer. Since then technology has developed in such a manner that information is produced and transferred at a rapid pace.

Figure 1: TIME magazine cover September 30, 2013. (Gibbs 2011-2016).

Figure 2: TIME magazine cover March 6, 2015. (Gibbs 2011-2016).

Figure 3: TIME magazine cover February 21, 2011. (Gibbs 2011-2016).

Figure 4: TIME magazine cover August 17, 2015. (Gibbs 2011-2016).

Figure 5: TIME magazine cover September 22, 2014. (Gibbs 2011-2016).

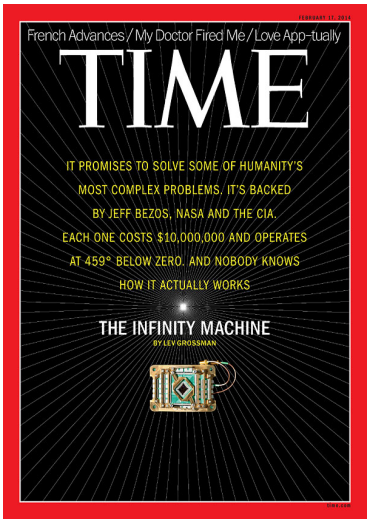

Figure 6: TIME magazine cover February 17, 2014. (Gibbs 2011-2016).

Figure 7: TIME magazine cover December 29, 2014/ January 5, 2015. (Gibbs 2011-2016).

Figure 8: TIME magazine cover November 29, 2013. (Gibbs 2011-2016).

Figure 9: TIME magazine cover March 7, 2016. (Gibbs 2011-2016)

1.1 Background, context and understanding

From pre-historical technological interventions such as making fire and the invention of the wheel, to the development of a mass-produced industrial society, technology has always transformed and influenced existence (Rutsky 1999:3). Subject to the broader shift of modernism to postmodernism, technology has become a critical part of society. Within the twenty-first century, civilisation has evolved from an industrial culture to what Baudrillard (as quoted in Rutsky 1999:3) refers to as a "techno-culture". In other words, the world has undergone an indefinite, yet indisputable, transfiguration by the means of technology (Rutsky 1999:1) resulting in a culture driven by technological innovation.

In the so-called 'New Digital Age' (Cohen & Schmidt 2013:3),[2] the effects of technology grow exponentially and change life at an unprecedented pace (Brooks 2002:6). For example, currently more than two billion people have access to the Internet, perhaps the most powerful technological invention, and it is estimated that in 2025, the majority of the global population will be online, using computers with speed, thereby gaining power and access to defy natural limitations (Cohen & Schmidt 2013:5). These technological developments present possibilities for scientific and cultural revolutions, allowing for new means of empowerment and connectivity, which transcend traditional political and social borders (Cohen & Schmidt 2013:7).

In addition to the effect that technology has on society and culture, the current technological transformations also influence the single nature of the human being and thus the branch of ontology. On an individual level, contemporary technology impacts human agency and the perception of space, place and time; it "changes people's awareness of themselves, of one another, of their relationship with the world (…) it challenges our notions not only of time and distance, but of mind" (Turkle 2005:18-19). Donna Haraway (1990:192) indicates that there no longer exists a distinction or boundary between technology and humans. Technology forms part of our being as "we are cyborgs" and the hybrid relationship between technology and humans "is our ontology; it gives us our politics" (Haraway 1990:191). Thus there is no

[2] The 'New Digital Age' refers to the present and future of the current technologically driven society, often characterised by Web 2.0, social media and interactive networks (Cohen & Schmidt 2013:3). Therefore this study foregrounds the exploration, understanding and interpretation of the examples from visual culture within the context of the above-mentioned 'Digital Age', as well as the 'New Digital Age'.

longer an internal or external division between technology and humans as our technologies are also our beings. In addition, Schroeder (1994:520) notes that technologies such as Virtual Reality simulations can alter human consciousness. Simultaneously, Igor Aleksander (a leading researcher in machine consciousness) argues that several technologies and robots currently show signs of a "technological consciousness" and self-awareness (Moore 2004:16). Thus technology intercedes with the various properties of personhood—self-concepts, mind, consciousness—which includes the critical notion of the soul (Lacewing 2008). It is precisely this intersection where technology and constructs of the soul meet, as emphasised and demonstrated by the above-mentioned *TIME* magazine covers (Figures 1-9), that forms the focal point of this study.

To critically analyse the convergence of technology and the soul, reference is made to the manner in which the relationship is presented in visual culture. Within the twenty-first century, we experience and perceive the world and our own being primarily through vision (Jay 1994:543). With the development of new technologies, the visual realm and the image now also dominates the cultural field (Mirzoeff 1998; 1999). Therefore visual culture, for the purpose of this study, is accepted as "all those visual artefacts, natural forms and ways of thinking that make up perception in our everyday life" (Schirato & Webb 2004:5). Freedman (2003) argues that the visual contributes significantly to how we construct our understanding of the world we live in, as well as the concepts we have of ourselves. Thus visual culture not only represents, but also informs and influences the self and impacts its identities. An engagement with the visual, as well as a deconstruction and interpretation of visual culture or visual artefacts, then allows us to form meaning and learn about our ontology and (more specifically) the current relationship between the soul (our souls) and technology in society. Accordingly, the study is positioned within the discipline of visual culture, to analyse the relationship between technology and the soul, as visual events represent and influence philosophical thoughts and reasoning while making important assertions about the current nature of the soul and technology in society (Falzon 2002:4; Wartenberg 2006:48).

Additionally, the realm of the visual and the concepts of technology and the soul are also closely related. For instance, Heidegger (1977:34) notes that art is apparent in the Greek root of the word technology, *technē*, which translates as art, skill or craft, thus forming a critical part of the "essence" of technology (Rutsky 1999:4). It is widely believed that 'art is the window to man's soul', suggesting that the visual image often reveals intricacies regarding

the soul (Elkins 1995:78).[3] This link between the soul and art (or visual culture for our purposes) most likely stems from ancient Greek philosophy which contends that the sense of vision is a prominent source of knowledge and insight, as Aristotle (in Arnheim 1969:12) indicates: "the soul never thinks without an image". In turn, the Latin root of the word image, *imago*, refers to an idealised mental notion of the self or someone else (Shapiro 2008) also relating to the soul.[4] Accordingly, the realm of technology and the notion of the soul are both in constant dialogue through the image. Therefore, it is not only appropriate, but also inevitable that an investigation of the relation between the soul and technology ensues by referring to the manner in which the relationship is embodied in contemporary visual culture and images.

Even though this study aims to focus solely on the manifestation of technology and the soul in visual culture, it is helpful to start the exploration into the theme of technology and the soul by unpacking each notion separately. This brief delimitation allows the study to align itself with specific philosophical standpoints, theoretical notions and various perspectives, which, in turn, creates helpful frameworks to keep the broad-natured scope of the discussion focused and precise. Consequently, the next section of this introduction aims to enquire into the phenomena of technology and the soul respectively.

1.1.1 Targeting technology

Technology is a heavy-loaded concept with many different interpretations. This study prefers to define technology using Martin Heidegger's philosophy of being, which encapsulates phenomenology and technology within the modern context. Heidegger (1962) argues that Being (*Sein*), is not a confined entity, or an object nor a specific event, rather it is an unfolding of events around us, an unfolding of life. Being pertains to the nature of our existence. Being also applies to technology, indicating that technology likewise reveals itself as a particular way of being. Technology is not simply a tool, or a system, nor a specific experience or occurrence; it is a process whereby lives are revealed or unfolded. Heidegger's idea of the unfolding Being is extended to define technology. Heidegger (1962) argues that man unfolds reality and that things come into existence through man. Thus, technology

[3] The relation between the soul and art is often demonstrated in the practise of art therapy, where art objects are psychoanalysed as manifestations of soul (McNiff 1988).
[4] *Imago* also pertains to the realm of the transcendent as Christian theology often refers to the *Imago Dei* - humanity's image of God (Middleton 2005:9).

comes into existence through man's actions and creations. However, technology has come into being to such an extent that we are now able to state that man comes into being through technology. By focusing on the essence of technology, Heidegger (1977) argues that technology not only reveals reality, but does so in a particular manner: as *Bestand* (standing reserve) technology does not oppose man as mere objects, but exists in anticipation to be used in a challenging and expediting way (Heidegger 1977:8). Reality is revealed through technology as *Gestell* (enframing), which is the essence of modern technology (Heidegger 1977:9). The enframing does exactly what the word indicates: it places everything as a standing reserve in a frame - enclosing reality in its entirety. In this manner technology enframes our world, our existence and our being. Just as technology is integrated into our lives, we are also integrated into technology.

Philosopher Hans Jonas, a distinguished student of Heidegger, maintains that any discussion of technology should consider the formal characteristics, the material manifestation, as well as the ethics of modern technology (1979).[5] The formal traits include the development of technology from a possession to a practice or process. Technology is no longer considered an instrument, but an independent agency that demands respect. Furthermore, modern technology never stops developing, spreads at a rapid speed and manifests in circular patterns (Jonas 1979:35). Technology materially manifests in different forms, from modern inventions, such as the smartphone, to bodily alterations. Immersed in technological spaces, humans find themselves surrounded by and integrated with an arrangement of technical objects. Accordingly, various technological identities also come into being such as cyborgs, posthumanism and techno-hybrids, which form a critical part of a discussion concerning the intersection between the soul and technology.

Therefore, broadly aligned with Heidegger and Jonas, my use of the term *technology* refers to a process or action that develops and enframes human life, contending that it surpasses an instrumentalist view of technology as no more than a tool for human usage. In addition, following Jonas (1979), the study also considers technology in terms of its formal characteristics and material manifestation, as well as ethical implications. However, it is not

[5] Hans Jonas was highly influenced by Heidegger's description of humanity's way of Being; accordingly his discussion of technology builds on Heidegger's phenomenology. However it is important to note that in Jonas's later work he critiques Heidegger for his alleged political commitments (Vogel 1995:55).

the purpose of the study to determine whether technology should be viewed in a positive or negative light, especially since determining the actual intrinsic nature of technology appears to be an impossible task. Heidegger (1977:4) suggests that it does not matter whether or not technology is regarded as favourable or oppositional, the important aspect is that it cannot be ignored: "[e]verywhere we remain unfree and chained to technology, whether we passionately affirm or deny it". Thus this research study selects to pay attention to the relation between modern technology and human beings, as suggested by Heidegger, and does not propose a particular judgement on the good versus the evil of technology.

Heidegger (1977:4) also clarifies that technology is never impartial, asserting that "we are delivered over to it [technology] in the worst possible way when we regard it as something neutral". Furthermore, Heidegger explains that the exploration of technology and its relation to the soul cannot be explored from a neutral perspective. For this reason, in this research study the concept of technology (in relation to the soul) is examined from three different worldviews, namely Gnosticism (dualism), animism (monism) and physicalism.

1.1.2 A sensitive soul

An enquiry into the notion of the soul is an ancient, somewhat contested, philosophical question that incorporates various fields such as science, theology and psychology. The idea of the soul connotes different interpretations, depending on individual beliefs, cultures, religions, societies and disciplines (Murphy 1998:1). Moreover, an individual's formation of the concept of the soul is usually based on specific exemplary experiences and practices developed in different traditions (Mcghee 1996:206). Despite the different meanings attached to the soul, most people around the world currently continue to base their choices on the fact that they believe in some form of a soulful existence (Cave 2013:16). For example, we often refer to concepts based on the notion of the soul, such as 'soul mates' and 'a sensitive soul'. Consequently, although admittedly an oversimplification of the issues at hand, it can be suggested that the idea of the soul continues to govern and influence the average person's behaviour.

Proving (or disproving) the actual existence of the soul has been the concern of both religious institutions and scientific practices for millennia. Nevertheless the concept remains "elusive" (Goldblatt 2011) and difficult to validate, but is simultaneously difficult to deny. In a scientifically and technologically enhanced society a discussion of the soul is often associated

with scepticism and disbelief, as empirical evidence cannot be found for such an immaterial principle (Casey 2013:32). Yet in contemporary society people are becoming continuously more interested in the notion of the soul as they "are dissatisfied with the 'soulless' existence of modern culture (…) the thought of the soul offers just what they are longing for: depth, anchored lives, a spiritual and moral compass" (Casey 2013:32). Therefore, it remains a relevant and meaningful phenomenon to consider, not only on a psychological level, but also anthropologically. Naturally, an enquiry into the relationship between technology and the soul implies the researcher's belief in the existence of the soul. I acknowledge my subjective position as researcher, but view this as an enabling factor (guided by Gadamer's hermeneutics), which provides me with a horizon to engage with the outside world and various other perspectives of the soul. Furthermore, it is not the aim of this exploration to determine, nor question, the validity of the soul, but rather to merely examine the various manifestations of the concept of the soul in relation to contemporary technology.[6]

But what exactly is the soul? Acclaimed author and theologian, Mark Goldblatt (2011) describes the soul in everyday denominations as "the voice-inside-our-head"; he explains that the soul must be:

> [T]he *me-ness* of me, the sense of first personhood on which the rest of my consciousness experiences hang. It's the rooting existence, stripped of language and memory, stripped of thought and disposition; it's the unified presence by which I differentiate myself from whatever I encounter. I am not the thing I encounter; I am the thing doing the encountering (Goldblatt 2011).

According to this viewpoint, the soul is the essence or core of a being that determines its true actuality, which distinguishes the self from others and becomes the life force within one's existence. Similarly, Carroll (2015:29), following Aristotle and Aquinas, explains that the soul indicates "the form of a living thing" as the soul is what makes a living entity the type of living thing it is. Thus the soul is the actual essence or principle of all living things:

> The soul is not a "what"; it is "that by which." A "that by which" is a real principle that is an essential source of the actuality of a thing (Carroll 2015:29).

In contemporary society there are several terms that are used synonymously with the concept of the soul, such as *mind* and *self*. Berti (2013:1) explains that the words "mind" and "soul" both derive from the Greek word *psychê*, from where it took on the meaning of soul (*anima*),

[6] In Chapter 4, however, the validity of a physicalist perspective on the soul is explored.

as well as the meaning of having capabilities surpassing those of animals as mind (*mens*). As a result, both mind and soul refer to an entity existing in different relations to the body and thus are likened to one another (Berti 2013:1). The two terms often differ based on the context in which they are used. For instance, the word *soul* is used more prominently in traditional philosophy, while *mind* is more often found in modern scientific and philosophical language (Berti 2013:1).

In turn, the word *self* has become a popular term used in psychological practices to describe the soul, as well as the states and capacities it displays (volition, thought, belief, desire, love, fear) and in this way "the self is a substantial soul" (Moreland 1998:39). Berke and Schneider (2006:335; 351) prove the proximity between the self and the soul by arguing that "the soul vitalizes the self (…) meanwhile, the self provides a skin for the soul". Although the self and the soul are closely related, the word *consciousness* cannot be used interchangeably with the idea of the soul.[7] Although closely related, "consciousness" is based on the physical matter of the brain, which comprises of material components that make up sensation, memory and language (Goldblatt 2011). Goldblatt (2011) proposes that the relation between the soul and consciousness can be explained by likening the two notions to a cotton candy cone. The actual cotton candy forms around a cone. In this case, consciousness can be likened to the cotton candy, while the soul is the cone, i.e. the basis or platform around which the candy (consciousness) is formed. Therefore a being can have both consciousness as well as a soul. Hence, following Goldblatt, this study considers the soul as indistinguishable from the self and the mind, while consciousness is understood to be an (physical) aspect of the soul.

Furthermore, it is necessary to note that this investigation, aligned with twentieth century philosophers Carl Jung and BHT Gahan, distinguishes between the concepts of the soul and spirit. Spirit refers to the sacred part of a being governed entirely by holy forces. The spiritual denotes an entity more pure and divine than the soul. The soul, although connected to the divine, still possesses vulnerable qualities such as affects, impulses, authenticity, passions and emotions. The spirit, in turn, is free of these humane traits. From a theological point of view, Gahan (1917:265) argues that "the spirit is higher than the soul" maintaining that spirit

[7] For those that deny the existence of the soul, such as materialists, the consciousness is the only essence of a being and therefore they argue that, for them, consciousness takes the place of "the soul" in their belief system (Goldblatt 2011). Therefore, for materialists and physicalists the soul is simply consciousness.

is entirely part of the transcendent world, where as the soul forms part of both the transcendent and immanent world. Similarly, from a psychological point of view, Jung (in Berke & Schneider 2006:338-339) differentiates between the soul and the spirit, applying 'spirit' to the ethereal and indescribable, completely detached from the physical world and the soul to that which "integrates inner reality with larger realities". This distinction can be likened to a firework display, where the actual explosion and moment of awe represents the spiritual and the soul encompasses the entire process of putting on the display, such as all earthly matters, cultural experiences, materials and techniques. For that reason, this study centres on the soul, as it is located in the immediate, physical world. Even though the spiritual is mentioned, it does not form an integral part of the exploration.

In terms of the philosophical history of the concept of the soul, the phenomenon has mostly been used in terms of the philosophical denomination *substance* (Gray 2010:638), which is as a particular entity with specific attributions, faculties and predicates (Thilly 1902:16). Since ancient times philosophers have attempted to define and explain the nature of the substance of the soul. Early philosophical efforts often inadvertently provide over-reduced accounts for this notion of the soul, such as air (Anaximenes), fire (Heracleitus), harmony (Pythagoras) and blood (Empedecoles) (Alexander 1912:426). Not unlike most of Western Philosophy, it is only with the work of prominent Greek philosopher Plato (stemming from his teacher and mentor, Socrates's, reasoning) that a more complex understanding of the soul developed (Alexander 1912:426).

Plato formulates his philosophy of the soul in *Republic* (436b) by providing an analogy between the parts of the soul and the classes of society (*Republic* 436b). For Plato, a person consists of a physical, material body and three types of immortal souls or *psyche*, namely the rational soul, the spirited soul and the appetitive soul (*Republic* 443d). Kemerling (2011) explains Plato's three souls respectively as (1) the thinking or intellectual soul, which makes informed and well-reasoned decisions, (2) the willing and courageous soul, which acts out what the thinking soul chooses and (3) the feeling or desiring soul, which responds on emotion, wanting and lusting after several things - this soul should be kept intact through self-control. When these three souls function together in harmony a peaceful state of being emerges (*Republic* 443d). In this sense Plato's philosophy of the soul can be seen as the predecessor of what is known in contemporary times as a dualistic notion of the soul - the soul separated from the body (Gray 2010:638).

As a student of Plato, Aristotle, also presents his beliefs on the notion of the soul, as articulated in *De Anima II* (ca. 350 BC). For Aristotle (as quoted in Alexander 1912:426) the soul is the "actuality" of existence, the "entelechy of a natural body endowed with the capacity of life". Hence, the soul is considered to be the manifestation or form of a specific body (Bolton 1978:259). It is the sense and substance of anything that has the potential of life, becoming the essence of an entity (Bolton 1978:260). Aristotle regards the soul as the basis of life, thus if an entity has life it is ensouled and *vice versa* (Bolton 1978:260). This essence of life co-exists in harmony with any physical body and cannot be separated into two distinct entities; Aristotle's soul and body interflow and exist as a unified combination (Gottschalk 1971:182). In this way, the soul is also understood as the core factor of life (Gibbs 1976:539). Aristotle argues that the soul is similar to a "life-energy" that forms part of a being (Gray 2010:640) and implies various faculties, such as movement, sensation, psyche (mind), knowledge, power, desire (searching) and potentiality (Gray 2010:640; Gibbs 1976:539). Thus, to a certain extent, Aristotle's description of the soul contradicts that of Plato, as Aristotle provides an anti-dualist definition, which in contemporary society is considered more monistic, as the soul and body are embodied as one (Gray 2010:641).

Stemming from either Platonic dualism or Aristotelian monism, other theorists formulate various viewpoints on the soul and its relation to the body, often considerably influenced by their religious backgrounds (Gray 2010:641).[8] For instance, Islamic metaphysical philosopher, Avicenna, in *Compendium on the Soul (Maqala fi'l-nafs)*, conceptualises the soul as an entity completely separate or independent from corporeality owing to the human being's ability to be self-aware of its existence (Gutas 2012:417-418). Medieval theologian Saint Thomas Aquinas extends this view by arguing that the soul can exist as an individual entity on its own, yet in order for it to function to its full capacity it needs to be embodied, which is often referred to as "holistic dualism" (Gray 2010:641).

[8] Based on the fact that religious and theological reasoning form a critical part of the philosophical development of the idea of the soul, religion and theology cannot be separated from a discussion on the soul. Theological perspectives are therefore incorporated in this exploration, mostly through the analysis of the gnostic worldview. In spite of this, it should be made clear that the study does not seek to adopt, or advocate for/against, a specific religious stance or conviction.

During the Age of Enlightenment and the rise of empiricism (1620-1780) however, the nature of the soul became an objective problem that was explained through the observation of the natural rationalist system of the world (Bristow 2010). Thus the interpretation of the soul was based on systematic knowledge, instead of taking on a more religious focus such as in the earlier thoughts of Plato, Aristotle, Avicenna and Aquinas. It is in this context that Cartesian dualism, as posited by Rene Descartes, became a philosophical question, which remains debated even in contemporary times (Gray 2010:641). Descartes famously estimates that the body and the soul, or body and mind, are two different entities that can be separated from one another (Gray 2010:641). For Descartes (CSM II 26) the body is a "whole mechanical structure of limbs which can be seen in a corpse", while the soul is characterised by the ability to think, which constitutes the sense of self for "I am, then, in the strict sense only a thing that thinks; that is, I am a mind, or intelligence, or intellect, or reason" (Descartes CSM II 27). During this 'Age of Reason' a monistic approach to the soul also continued parallel to Descartes' perspective, as several philosophers including Kant and Hegel critiqued the mind-body problem. Hegel, for example, asserts that the soul and the mind all stem from one universal being (God or mind), therefore there is no differentiation necessary between the soul and body as everything is considered to be one within the universal creator (Daniels 2008:129). More recently, Gilbert Ryle (1949) also contested Cartesian dualism, arguing that the workings of the mind and the body cannot be separated from one another, as all mental thought is the result of bodily functions or actions (Gray 2010:641; Berti 2013:2).

Modern and contemporary views on the soul often deconstruct the clear monistic versus dualistic approaches that dominated earlier philosophical assertions. In particular, Maurice Merleau-Ponty's *The visible and the invisible* (1968) determines an embodied view of the soul and body where "[t]here is a body of the mind, and a mind of the body and a chasm between them" (Merleau-Ponty 1968:259). The crossing between mind and body is further broadened in his concept of *flesh* "which is not the objective body, nor the body thought by the soul as its own (Descartes)" (Merleau-Ponty 1968:259). Merleau-Ponty (1968:147) therefore uses the concept of *flesh* to displace the split between the mind and body as *flesh* becomes "the general manner of being" that joins the soul and body, while he simultaneously emphasises that these concepts are irreducible to one another and reliant on one another. Additionally, Luce Irigaray (1996:123) maintains that the bodily function of breathing is the start of the possibility or potential of the soul and divinity. Just as Merleau-Ponty's *flesh* becomes a chiasm between the mind and the body, so too does Irigaray's *breath* become a

passage between the soul and the body or the metaphysical and the physical (Holmes & Škof 2013:36, 37).

In addition to the discussion of a monistic and dualistic approach to the soul and body, contemporary and ancient reasoning also focuses on the transcendental nature of the soul, the ethical implications of the immortal soul (Gray 2010:645), as well as the theological beauty of a soul (Casey 2013:37). The soul is also considered as the essence of life that has the potential to interact with the transcendent (Gray 2010:637). Transcendence implies that which exceeds consciousness and the secular world (Marion 2007:17). Thus the soul becomes the link between humanity and the absolute or the divine. This definition also adds a faculty of space (or a spatial metaphor) to the understanding of being ensouled (Caputo & Scalon 2007:11). Based on its transcendental nature, the soul often is considered to be immortal, believed to outlast the death of the physical body. The mortality or immortality of the soul brings about ethical concerns that are widely contested, especially in terms of topical issues such as assisted reproduction and euthanasia (Gray 2010:645-646). Furthermore, from a theological perspective, the soul is often perceived as a reflection of the divine source, for example from a Christian perspective the soul is made in the likeness of God (Casey 2013:38). Thus the soul, just as the divine, cannot be fully fathomed, yet it reveals beauty and harmony between people. Casey (2013:39) explains that "[t]he beauty of the soul can survive the ugly and tragic dimensions of life. These vicissitudes of life do not necessarily damage the soul. The only thing that wounds the soul and disfigures its beauty is doing evil".

This brief and limited glance over arguably some of the most important discourse on the soul (as mainly suggested by Gray [2010]) reveals the soul as the substance and essence of life, which holds a transcendental potential and is beatific and ethical in nature. Thus the soul is understood throughout this exploration as the basic essence of life with various faculties that serves as the interaction between the humane and the absolute. Through this overview it also becomes apparent that the soul can be approached in different manners. For example, a dualistic approach argues for a soul separate from the body, a monistic approach attests to an embodied entity irreducible and inseparable from the body, and finally a physicalist approach claims an entire disregard for the soul. These fundamental approaches are respectively reflected in the trends of Gnosticism (dualism), animism (monism) and physicalism, which are the different perspectives through which the study explores the relationship between technology and the soul.

1.1.3 Going Gray

From the separate delineations of the understanding of technology and the soul it is evident that an investigation regarding the relation between these two concepts needs to be approached from various perspectives. For this reason the exploration aligns with the three different frameworks of contemporary views of being, as identified by Alison Gray (2010:638).[9] According to these frameworks most people either take a physicalist, monistic (in the specific form of animism) or dualistic (in the specific form of Gnosticism) approach to explain notions of being, the soul and mind. Various other theorists also emphasise these categories as different approaches to the soul.[10] For instance, contemporary body-mind philosopher, Tim Crane (2000:1), identifies monism, dualism and physicalism as the three pertinent theories of the ontology of the mind, adding that dualism often stands in opposition to monism and physicalism. Additionally, theologian Celia Deane-Drummond (2009) argues that several worldviews regarding the mind, body and theology currently exist, of which dualism, monism and material monism (physicalism) are the most prominent. She also highlights that none of these approaches can ever truly be considered neutral, since each approach requires acknowledgement of foundational beliefs (Deane-Drummond 2009). Gray (2010:637) emphasises that it is important to consider monism, dualism and physicalism when discussing human nature to improve communication. Based on Gray's argument, the relationship between the soul and technology is explored by utilising these three main categories. What follows is a brief outline of each trend. The selected visual examples to be hermeneutically analysed throughout this investigation are also introduced as they align with a specific perspective.

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[9] It is necessary to note that Gray, as a psychiatrist, studies the fundamental workings of the self. Yet her contextual background includes several spiritual and religious beliefs and practices. Therefore her work and interpretation of the soul and the three trends of being, including the physicalist perspective, often tend to have spiritual underpinnings. For instance, when considering the physicalist perspective, Gray (2010:644) also includes non-reductive physicalism, which acknowledges a biblical revelation in scientific discoveries. In turn then it is possible that, to a certain extent, these underpinnings can also reflect throughout this exploration, since the study follows Gray's assertions.

[10] See also Scruton (2014) who identifies three categories - dualism, lifeworlds and overreaching intentionality - to describe different philosophical discussions on the soul. If analysed, Scruton's concepts show clear similarities to Gray's three categories. Scruton's cognitive dualism refers to "the unified reality containing the natural physical world and the lived world of minds" (Pringle 2014:380) and can thus be likened to dualism. In turn, Scruton's lifeworld refers to experience arising from nature and self-consciousness (Pringle 2014:380) and therefore shows similarities to physicalism, which also argues that everything develops from materiality. Finally, Scruton identifies overreaching intentionality as the attempt of the soul to reach beyond the body into the transcendent (Pringle 2014:380) and can accordingly be compared to the animistic perspective.

Gray (2010:638) maintains that a **monistic** outlook on the soul argues that "human beings are ensouled bodies" that are living, breathing, holistic persons. Subsequently, Gray (2010:644) identifies animistic religions as monistic, because animists view most of reality as one holistic unity. Animism is one of anthropology's earliest and fundamental concepts (Bird-David 1999:67). It holds the belief that inside of all ordinary visible objects there is an invisible being classified as the soul. According to the classical authors (Comte, Taylor, Marett and Freud) it can be seen as one of the most primary forms of religious experience (Aupers 2002:200). The early animists saw the natural environment, such as rocks, trees, stars and the moon as living entities with souls, yet current animists focus on a more generalised perception, arguing that what is normally considered to be lifeless actually has life moving through it (Bird-David 1999:67). Animistic focus is usually on the spiritual existence of non-empirical entities, as well as living in harmony and respect with and between all beings (Harvey 2006:6), following the belief that there is a life force moving through all things. For the purpose of the study, Aupers's (2002:202) understanding is used, arguing that animism is:

> (1) the attribution of subjective characteristics to the material environment, combined with (2) the assumption that objects actively and autonomously exercise influence over the human lifeworld, which is accompanied by (3) feelings of humility manifesting itself in fear, fascination and awe.

Aupers (2002:199) asserts that animism is kindled by modern technology, because people often consider technology as "an intelligent, autonomous force" that can "express feelings of humanity". The study focuses on Aupers's understanding of animism, as he situates the worldview within the context of the Digital Age and relates it to the relationship between technology and the soul.

Based on Aupers's definition, various visual examples that suggest that technological inventions are ensouled or possess humane characteristics, following an animistic perspective, are identified (Figure 10). These include the films *Lars and the Real Girl* (Gillespie 2007a), which depicts the relationship between a man and a blow-up doll, as well as *her* (Jonze 2013), which portrays a man who falls in love with an operating system. Brendan Fitzpatrick's *Invisible Light* (2014) photographic series of X-rayed toys also highlights the animistic relationship between technology and the soul. A discussion of these three visual examples, in turn, emphasises the animistic characteristics present in the technological and visual field of toys and puppetry. As a result, the animistic relationship

between technology and the soul is explored by referring to and analysing these films, photographs and exhibitions.

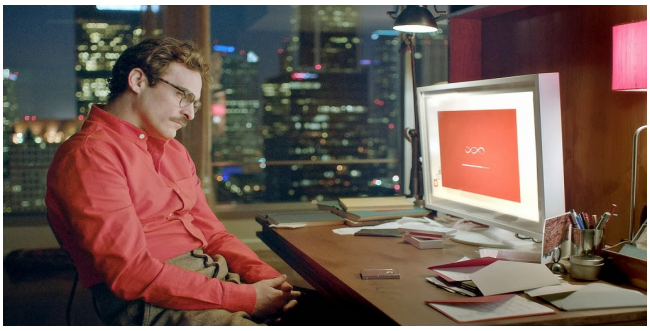
In contrast to monism, Gray (2010:643) also identifies a **dualistic** outlook on being. She explains that, stemming from ancient beliefs, many Christians consider the body "as a shell and the soul escaping at death to be with God" (Gray 2010:643). Owing to the Christian teachings, the notion of escaping from the earthly body, as well as the ancient origins of dualism (Gray 2010:643), the gnostic approach, as an evident practice of dualism, is to be explored. Historically, the gnostic worldview is considered to have been brought forward by Christian philosophers (Wilson 1955:195). These philosophers were aiming to combine their Jewish beliefs to the cosmogony and philosophies of their age (Wilson 1955:195). However, in modern society, Gnosticism is a framework focusing on religious teachings that embraces myths and mysteries of creation. A gnostic outlook believes in a transcending, righteous God, as well as an evil cosmos. Gnostics think of the soul as the embodiment of the transcending God on earth (Hoeller 2012). Amongst other things, Gnosticism involves hierarchies, redemption and celestial beings (Walker 1983:11). Gnosticism also closely relates to cyberculture, as Krueger (2005:81-82) emphasises that there are "gnostic motives in technology euphoria" and that virtual existence or "cybergnosis" (Kreuger 2005:86) can be seen as the gnostic element of life in the digital realm.

Concerning this dualistic, gnostic approach to technology and the soul, the films *Gravity* (Cuarón, 2013), *Crash* (Haggis, 2004) and *Never Let Me Go* (Romanek, 2010) establish fundamental ideas of how technology is related to the transcendent soul (Figure 11). The film *Never Let Me Go* is a dystopian drama set in an alternate history following a love triangle of human clones, questioning whether human creations can have souls that transcend earth. In the same manner *Crash* manifests the "intersection of race, ethnicity, religion and social class in a cultural and political environment" (Villalba & Redmond 2008:264) and argues that connection and a moment of transcendence occurs when vehicles collide and connect. The film asserts that this collision of technology leads to souls meeting in a divine space. Additionally, Cuarón's award-winning, space-thriller, *Gravity*, follows astronauts on a space mission, who become detached from their shuttle and must find their way home. Overcoming science, the astronauts' journey is one of transcendence and religion. Furthermore, artworks by Aleksandra Mir combine religious, art historical paintings with symbols of the Digital Age, manifesting a satirical connection between technology and soul (Figure 11). Together

these visual representations suggest a gnostic take on a world embedded in the phenomena of technology.

Finally, Gray (2010:641) maintains that **physicalism**, also known as materialism, is the third perspective on the notion of being in contemporary society. As Gray's final category, physicalism explains the world according to science and physics (Meyering 2002:165). In this perspective everything is reduced to atoms, molecules and physical bodies. Physicalism is associated with rationality and empirical evidence. It establishes that the world should be interpreted in the most manageable physical terms (Gray 2010:642). This trend explains the soul through objective knowledge gained by sensory interaction (Bernstein 2008:9; Cave 2013:16). Therefore, as mentioned, physicalists contend that the soul is an unnecessary concept (Gray 2010:641). Nevertheless, Gray (2010) proposes physicalism as a critical view of the soul, since the rejection of a concept remains a specific perspective on the subject. As Carroll (2015:19) explains "[r]ejection of the idea of human souls is connected to the wider rejection of any fundamental, distinguishing characteristic of living things" and thus influences the question of "what it means to be alive". Hence the physicalist denial of the soul also reveals important aspects of ontology in relation to technology. In addition, physicalism is also closely related to the scientific world of technology. Padgett (2005:580) maintains that this "techno-secular" paradigm has taken the place of religion for many people. Therefore, physicalism is crucial to the discussion of the relationship between technology and soul.

Certain visual examples depict technology and the soul from a physicalist point of view, by depicting a world where technology and science exist with a disregard for the notion of the soul (Figure 12). These examples include the television film *Wit* (Nichols 2001), which illustrates the negative effects of technology, especially within the domain of a physicalist medical institution. The film addresses the tension between a physicalist and gnostic belief and subsequently debates the moral and political boundaries of technology. Another film depicting a physicalist worldview is *Transcendence* (Pfister 2014), which attempts to define the soul from a scientific point of view. Lastly, Greg Dunn's artworks of neuron cells capture the physiology of the human body through technology (Lewis 2014). Accordingly, these visual examples are interpreted by referring to a physicalist understanding of technology and the soul.



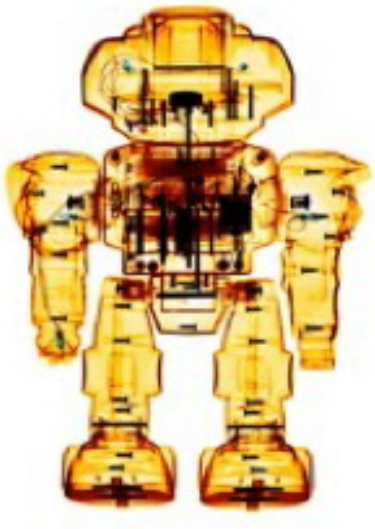


Figure 10: Visual examples representing an animistic approach to the soul and technology: screen shots from *her* (2013) (top) and *Lars and the Real Girl* (2007) (bottom), Brendan Fitzpatrick, X-ray of a toy robot (right), Android Extraterrestrial, *Invisible Light* (Fitzpatrick 2014).




Figure 11: Visual examples representing a gnostic approach to the soul and technology: screen shots from *Gravity* (2013) (top left), *Never Let Me Go* (2010) (top right) and *Crash* (2005) (bottom left), Aleksandra Mir, *Astronauts* (bottom right) (Mir 2015).

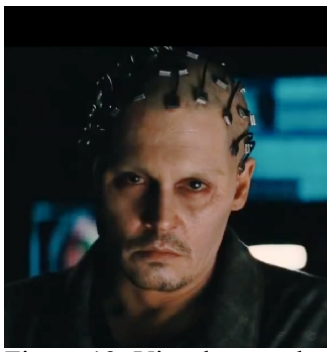


Figure 12: Visual examples representing a physicalist approach to the soul and technology: screen shots from *Transcendence* (2014) (left) and *Wit* (2001) (middle), Greg Dunn, *Cortical Columns* (right) (Dunn 2015a).

The relation and interaction between the animistic, gnostic and physicalist perspectives can be classified on a continuum (Figure 13) according to the position they occupy with regard to specific binaries, namely the belief in a soulful versus a soulless existence, as well as the belief in the transcendent versus an implosion into immanence. This continuum indicates the manner in which these three trends'—and the visual examples'—approaches to the soul differ, but also overlap in parts. In terms of the gnostic worldview, a strong belief in a transcendental nature exists, while the human being is treated as having a soulful existence. In turn, an animistic perspective strongly emphasises a soulful existence in all entities, whilst remaining open to a belief in transcendence. Finally, a physicalist outlook argues for an immanent and secular world, where beings are considered to be soulless. Based on this mapping of the three perspectives, a new taxonomy of thinking about the soul-body-transcendental relation occurs. Traditionally, it is often stated that the main contrast in the way of thinking about the soul and body occurs between dualism and monism (Crane 2000:1); however, in terms of transcendence and soulfulness, the dualistic trend (Gnosticism) and monistic trend (animism) both occur in opposition to physicalism. Considering the visual examples, this implies that, in terms of transcendence and soulfulness, the relationship between technology and the soul portrayed in the films *Gravity* and *her,* for instance, stand in opposition to the relation portrayed in *Transcendence.* Accordingly, these binary oppositions are explored throughout this investigation to identify each of Gray's three categories of technology and soul in relation to one another.

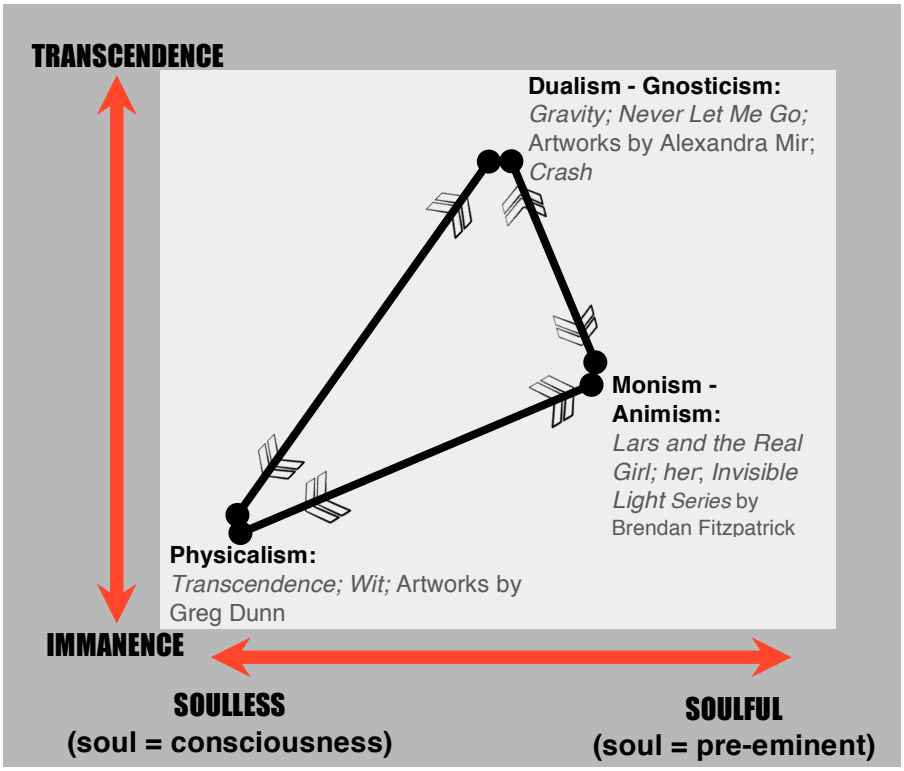


Figure 13: Gray's three perspective and their applicable visual examples, classified on a continuum, indicating their relation to one another and various binary notions of being. (Diagram by the author).

1.2 Rationale and aims of the study

Extending from the contextual discussion, which establishes that in the Digital Age technology and the soul are intertwined, the research is limited to an examination of technology and the soul as a whole or unit. These concepts are not discussed as separate entities, as this is not of relevance to the investigation. The study considers the soul and technology together as they manifest within visual culture as either animistic, gnostic or physicalist. This unified concept is then hermeneutically explored through Gray's (2010) three categories: namely dualism as found in a gnostic approach, monism as it manifests in an animistic approach, as well as a physicalist approach. Rose (2007:349) suggests that using multiple trends, such as these, emphasises contradictory meanings and re-contextualises visual material.

After the analysis the study aims to apply the research, by presenting it in a digital format that visually maps the investigation and its findings. Incorporating the study within the realm of the digital is important as digital culture is becoming increasingly more prominent within the field of humanities and needs to be explored and integrated (Schreibman, Siemens & Unsworth 2004). The domain of digital humanities relates to the subject matter and is therefore also appropriate for this exploration. [11] The research is presented on a digital humanities platform, Scalar, which allows the viewer to scroll through various paths of the research. It also presents the overall relation between the various viewpoints on technology and the soul, making the research more accessible to the everyday scholar, as well as presenting the findings evidenced in the dissertation in an accessible, digital and visual manner. This, in turn, broadens the audience and scope of the study.

Throughout the analysis of the contemporary relationship between the soul and technology, reference is made to the manner in which the relationship is represented in visual culture by applying them to Gnosticism, animism and physicalism. These three categories' approaches to the soul differ, but also overlap in parts (indicated on the above continuum), which means the analysis of the visual examples differ and overlap accordingly.

[11] To view the current digital humanities project for this study visit: http://scalar.usc.edu/works/soulsearching-an-exploration-of-the-relationship-between-technology-and-the-soul-through-the-interpretation-of-contemporary-visual-texts/index

This relationship between technology and the soul needs to be explored, because it is not often discussed and researched within the disciplines of visual culture and philosophy. Not only does the study address this shortcoming in the literature of visual culture, but it also investigates religion and spirituality within postmodern thought. Gall (2013:362) maintains that these concepts are of importance in contemporary society, because these concepts form the basis of our understanding of humanity. There has also been a great return to discussions concerning religion and the Digital Age (Gall 2013:362). Furthermore, the study is also crucial in the domain of visual culture as it addresses the visual sign within a dynamic cultural framework that forms part of postmodern society (Mirzoeff 2009). It also addresses emerging fields within visual culture, for example the virtual world, posthumanism and digital culture.

Applying a philosophical examination to visual culture is vital, as it integrates the abstract and concrete paradigms (Falzon 2002:5), similar to the combination of the soul and technology. Padgett (2005:577) argues that theology and science, as a unit, is too often disregarded and should be discussed as it is a topic that can enhance beliefs. He also states that "we face an ongoing need for science, technology, ethics and theology to come together in various ways as we work toward a technological future" (Padgett 2005:583).

Turkle (2011:19) argues that a re-examination of the relationship between technology and the self is required in the current fast developing society. Thus the soul (or the self) should then also be re-examined in relation to technology. The field of psychology has shown an increasing interest in spirituality and visual culture, often using language, films and music to explain mental processes (Walsh 2011:894). This highlights the need for an interdisciplinary study that incorporates psychology, science, theology and visual culture.

Finally, the study confirms that it deals with sensitive notions, or what Brockman (2007:17) refers to as "dangerous ideas", that are often controversial topics in society. I argue that such discussions are required, because these have the potential to provide truthful results that could challenge current beliefs and change the manner in which we view the world (Pinker 2007:24).

This specified area and need for the study provide the basis for the objectives of the research. Accordingly, the study aims to critically analyse the relationship between the concepts of the

soul and technology through the use of Gnosticism, animism and physicalism (as unpacked above); to interpret various contemporary visual examples according to these three frameworks to examine what these examples express about the relationship between technology and the soul, and finally to present the findings of the study in digital format.

1.3 The research methodology and theoretical approach of the study

To achieve the above-mentioned aims, the study follows a theoretical and exploratory approach and research methodology. The research is qualitative while the study is exploratory and speculative, as there are no assumptions made about obtaining a conclusive answer. The investigation contains a literature study, integrated with visual interpretation, which provides a basis for further conclusions.

The study implements a hermeneutic framework by using three categories: a gnostic approach (dualism), an animistic approach (monism) and a physicalist approach. In combination these trends provide an unbiased position for the research, owing to the fact that they address various aspects of technology and the soul. Coeckelbergh (2010:958) states that the use of multiple trends to understand technological and spiritual culture holds many possibilities and eliminates a one-sided perspective. Since these approaches are already manifested in everyday actions, they can help us to "explore better ways to create, cope and live with technology, with others and quasi-others, and with ourselves" (Coeckelbergh 2010:976).

The exploration also follows a hermeneutic methodology, as hermeneutics "requires researchers to adopt much more critical, reflexive and open-ended historical perspectives in the study of the history and diversity of visual culture" (Heywood & Sandywell 1999:12). The circular method of hermeneutics, which is the practice of historical, linguistic and contextualised interpretations (Wachterhauser 1986:16), is applied to develop an understanding of the relationship between technology and the soul, as well as visual culture. Gadamer (2006:29) maintains that hermeneutics allows information to be brought from one space into another, "out of the world of the gods and into that of humans". This makes hermeneutics appropriate for this theme of study, which aims to understand modes of being and contextualise it within contemporary society. Furthermore, a hermeneutic approach empowers a philosophical understanding of what occurs when viewing and interacting with

visual images (Davey 1999:23), thus it is fitting for both the interpretation of theory and visual culture.

In its most extensive form, hermeneutics incorporates any type of reflection in order to comprehend (Gadamer 2006:29). As this leaves room for a boundless methodology, it is important to establish and limit the trace of hermeneutic thought that is used throughout this investigation. The hermeneutic methodology in this analysis adheres to the following characteristics (Kinsella 2006):

- The study seeks to understand and not provide an authoritative reading of technology, the soul, the three identified trends and the visual examples.
- The study acknowledges that all interpretations are influenced by context and does not aim to provide an objective view, but rather to engage with the wider socio-cultural context of a phenomena.
- The study recognises that language and history are both conditional and limit understanding.
- The study views that exploration of the relationship between technology and the soul as a conversation or dialogue between various examples needs to find a common language.
- The study follows the hermeneutic characteristic of welcoming and accepting ambiguity, resisting the notion that there can be one single reading of technology and the soul.

It is also worth briefly elaborating on the methodology applied to choose the selected examples of visual culture. Selected visual examples had to adhere to the following criteria:

- The visual example should be relevant in the contemporary Digital Age and therefore produced within the last ten years. Additionally it should be accessible by a wide audience.
- The visual example should, based on the author's hermeneutic interpretation, reflect a relationship between technology and the soul.
- The visual example should have clear, prominent evidence that it reflects traits of animism, Gnosticism or physicalism.

1.4 Literature Review

Considering the existing literature written on the relationship and application of technology, the soul and visual culture, it remains a limited field with space for further examination. A review of sources and references regarding these notions follows.

1.4.1 Literature concerning technology and the soul

Several authors have examined the existence of soul within technological inventions, but few are considered academic sources, leaving room for discussion within an academic field. In the philosophical novel, *Zen and the Art of Motorcycle Maintenance*, Robert Pirsig (1974), explores the metaphysics of quality and proposes important notions concerning technology and soul. His work provides a fresh view of technology, however as it is considered to be fictional, his ideas require further academic investigation. Similarly, Jeremy Clarkson (2009) argues from a journalistic perspective that technological entities have souls, in *I Know You Got Soul: Machines with that Certain Something*.

Furthermore, various scientific-based enquiries have studied the soul of technology. For example, *Does your iPod have a soul? Playing with random numbers* (Keeling 2007), mathematically investigates the phenomena that iPods tend to have preferences when selecting music at random. However, these studies lack philosophical reasoning on the subject.

When discussing technology and the soul, many theorists consider the effect of technology on human existence. Talbott, in *Devices of the Soul: Battling Ourselves in the Age of Machines* (2007), considers the psychology behind technology and the danger of having faith in machines. His discussion serves as a warning against embracing technology. Comparably, *Information Please: Culture & Politics in the Age of Digital Machines* (Poster 2006), also takes a negative view, as it discusses the ideological motivations behind a digital self. Alternatively, Jensen and Turkle take a more objective approach to the effects of technology. Jensen (2011) argues that technology influences the body and therefore the soul, as it serves as a space of projection, while Turkle (2005) attempts to understand human relationships with technology and argues that computers are extensions of the self that can lead to solitude. Conversely, some theorists consider the relation to be extremely positive. Ray Kurzweil in *The Age of Spiritual Machines* (1999) controversially proposes that machines can have their own spiritual experiences and will come into their own being in the future. In *What Technology Wants* (2010), Kelly proposes that technology is an evolving, living structure. He studies technology's 'behaviour' to establish the will of the separate living entity. Hence, there is a clear need for a critical, dynamic conversation in the literature concerning the effects of technology and the soul.

Some authors have taken a philosophical approach to consider the relationship between the soul and technology. Romanyshyn (1989), in *Technology as Symptom and Dream*, manifests how technology has shaped and constructed the soul through time. He addresses the wonder and magic of technology that is located within the soul. His arguments are of great significance to the study and addresses aspects such as space travel that are relevant to the visual examples. In turn, Brown, Murphy and Malony (1998) question whether traditional religious and philosophical notions of the soul are still applicable to the Digital Age. Similarly *The Transhumanist Reader* (More & Vita-More 2013), *Flesh and Machines: How Robots Will Change Us* (Brooks 2002) and *Cyborg Citizen* (Gray 2002), pose philosophical arguments about accepting technological developments. These sources address important posthumanist subject matter appropriate to visual culture. Finally, Giegerich (2007) examines the presence of technology and how it has transformed the relation between man and the world in *Technology and the Soul*.

In addition, a variety of sources investigate the relationship of technology and the soul from a (mostly one-dimensional) religious or spiritual point of view. Klenke (2010) considers the associations between spirituality, emotions and technology and how these display in a e-working environment, while Peters (2005) provides a Christian perspective on trans-humanism. The spiritual frame of reference also often includes discussions on enchantment, which is an important aspect of the current study as it relates to both the subject matter and visual culture. Both *The Enchantments of Technology* (Bailey 2005) and *The experience of enchantment in human-computer interaction* (McCarthy, Wright, Wallace & Dearden 2006) explore this phenomena.

1.4.2 Literature concerning technology and the soul, as well as visual culture

In *Design: the creative soul of technology*, McCracken (2000) argues that design is the soul of technology. Although his argument is metaphorical, he addresses the idea of technology and the soul, identifying further potential for investigation. Domingues (1998), an artist, also addresses the phenomena of a technological soul in her work and analysis thereof. She shows how "the exhausted man is receiving a technological soul" in her interactive installations, theoretically analysed in *The desert of passions and the technological soul* (1998).

Within the realm of visual culture, Walter Benjamin's (1936) pivotal text, *The work of art in the age of mechanical reproduction*, provides important elements of discussion on how technology, art and the soul of an artwork, interact. In addition, Du Preez (2009) discusses (from a gendered point of view) the seamless relation between technology and human interactions with reference to several visual examples. Finally, Oakes (2003) applies the philosophy of technology to the *Harry Potter* film franchise.

Thus, a limited amount of literature considers the integration of visual culture and technology and the soul, proving that there is substantial need for the investigation within the realm of visual studies.

1.4.3 Literature concerning the selected visual examples

Regarding the principal visual examples, there are few sources available that provide a critical analysis of their content. None of these sources are interpreted in relation to technology and the soul. However, some sources provide useful information regarding the various examples, such as a contextual background. As a result, these sources are applied as secondary sources. For example, Latour (2013) uses the film *Gravity* to examine the concepts of space, place and humanity. Additionally, several theorists, such as Kurzweil, Lanier and Rushkoff provide opinions on the possibility of the film *her* in *Can 'her' happen? The experts weigh in* (Ringen 2014). In turn, Knox (2006) analyses the film *Wit*, while Villalba and Redmond (2008) manifest the possibilities of the film *Crash.*

1.4.4 Literature concerning the methodology and theoretical approach

In *Interpreting Visual Culture. Explorations in the Hermeneutics of the Visual*, Heywood and Sandywell (1999) provide a clear understanding of visual culture in terms of hermeneutics. They provide a structural layout of how hermeneutic understanding is gained based on key theorists such as Gadamer and Heidegger. This serves as a constructive guideline for the interpretation of visual images. Gadamer's *Truth and Method* (1989) is used as a primary source for hermeneutic interpretation. Other authors, such as Schmidt (2006), Rees (2003) and Kinsella (2006) serve as secondary sources.

1.4.5 Literature concerning Gnosticism, animism and physicalism

The study utilises literature that examines the frameworks of Gnosticism, animism and physicalism. Authors consulted include Walker (1983), Wink (1993), Wilson (1955), Harvey

(2006), Aupers (2002), Bird-David (1999), Pettit 1993), Schiffer (1990) and Russel, Murphy, Meyering and Arbib (2002). Considering the specific relation of technology and the soul, a limited amount of research in relation to these trends exists. Bauman (2011), Cave (2013), Gray (2010), Krueger (2005), Padgett (2005), Pedersen and Willerslev (2012) as well as Walsh (2011) are amongst the few theorists that discuss the three perspectives in relation to the soul and technology.

Based on this review it is evident that there is a shortcoming of an interpretation of technology and the soul through visual culture. This study addresses this gap in the discourse.

1.5 Overview of Chapters

This introduction provides an overview of the study's main research question; namely, in what manner do selected multimodal visual examples represent the contemporary relationship between the concepts of the soul and technology. Throughout Chapter 1, the background and context of the study is considered, while presenting my understanding and position, as well as the study's perspective regarding important concepts such as technology and the soul. The chapter also discloses and examines the three main trends (Gnosticism, animism and physicalism) that are used to explore the relationship between the soul and technology. In addition, the introduction also discusses the theoretical and methodological framework of hermeneutics as fitting for the study within the realm of visual culture. Finally, the study's position within the available literature is established and it is demonstrated that there is a significant need for this examination. Thus, by stipulating the primary theories and concepts that become the essence of the research, Chapter 1 clarifies the *heart and soul* of this study.

Following the introduction, the next three chapters (Chapter 2, Chapter 3 and Chapter 4) are structured according to the trends of Gnosticism (dualism), animism (monism) and physicalism, as identified by Gray (2010:638). Each chapter is devoted to a specific category, which is applied to the manner in which the relationship between technology and the soul is represented in selected multimodal visual examples. As these trends hold different views of the soul and technology, while overlapping in part, these three chapters emphasise similarities and differences between these examples and their assertions about technology and the soul (especially in terms of the binary oppositions of transcendence versus immanence and soulful versus soulless). Thus, these three chapters critically analyse the relationship between technology and the soul by interpreting various contemporary examples of visual culture.

CHAPTER TWO
LIFE AND SOUL OF THE PARTY: ANIMISM AS MONISTIC VIEW OF TECHNOLOGY AND THE SOUL

<< soulful : open to transcendence >>

And in this galloping machine
the innocent soul sleeps
- Aking, I believe

Is it cruel to kick your robotic dog? On 16 February 2015, Boston Dynamics released a promotional video for its robotic dog named Spot. The video shows Spot's agility, as well as his ability to move at different speeds and even climb stairs. To demonstrate how sturdy the robot is, employees are shown kicking the robotic dog (Figure 14). The video sparked great controversy as many people thought the robot was being maltreated and abused. While watching the video viewers cannot help but to feel flustered and uncomfortable, showing empathy towards the robot (Woollaston 2015). This reaction manifests the complexity of technology in a postmodern society. Furthermore it highlights that, sometimes unknowingly, many people tend to behave in a manner true to an animistic worldview, because they often react to technology as entities with souls.

Figure 14: Screen shot from *Introducing Spot,* where an employee kicks a robotic dog in order to prove its stability (Boston Dynamics 2015).

The question of whether or not mishandling a robotic dog is a form of brutality can be viewed as an analogy for the larger discussion of whether or not technology is a self-governing being that demonstrates feelings and characteristics of humanness. Kevin Kelly (2010), co-founder

of *Wired* magazine, argues that "technology is a living force that can expand our individual potential - if we listen to what it wants". While discussing what exactly it is that technology wants, Kelly (2010:41) argues that with the current evolution of technology, it is no longer possible to view it as just an augmentation; rather it is an action or verb - a powerful ensouled force that inhabits a body. Hence, Kelly applies an animistic view to technology. It can therefore be presumed that Kelly sees the robotic dog as a living entity, with a soul that is being ill-treated. This perspective is an example of what Gray (2010) identifies as animistic thought in the current Digital Age.

What follows in this chapter is a description and contextual background of Gray's animistic category, as well as a critical analysis of selected contemporary visual examples that represent this perspective. The history and development of animism is discussed first, and then different viewpoints on the perspective are also examined. Extending from this description the author identifies main characteristics of animism in relation to technology and the soul. These characteristics are then used to analyse contemporary visual examples including the films *her* (Jonze 2013) and *Lars and the Real Girl* (Gillespie 2007a), as well as selected works from the photograph series *Invisible Light* (Fitzpatrick 2014). Accordingly, Chapter 2 explores the animistic relationship between technology and the soul as it manifests in visual culture.

As introduced, monism refers to a philosophical worldview that explains reality in terms of one single substance, while animism more specifically refers to the belief that the lifeless has life, spirit and soul, and therefore gives characteristics of living things to inanimate things and events (Hornborg 2006:1). For Gray (2010:644) animistic religions demonstrate the modern worldview of monism, as animists also view all of reality as one substance and argue that the soul cannot be separated from the body. She explains that animism is the addition of the concept of the soul not just to people, plants and animals, but also to objects including trees, rocks and mountains. An animistic point of view therefore considers the living and the nonliving "a single integrated whole, an embodied soul" (Gray 2010:644). In terms of the binary constructs of a soulful versus a soulless existence and a belief in the transcendent versus an implosion into immanence, animism focuses on a single, unified, soulful world and an entire embodied soulful existence, while being open to the transcendent, since animism argues that ensouled bodies are connected to the realm of the spiritual and to one another. How does an animist define the soul? Pedersen and Willerslev (2012:467) explain that the

animist soul is a "fuzzy" or hazy concept, as its understanding often changes based on context and the person identifying the soul. Thus different interpretations of the animistic soul are traced and considered to accurately describe this perspective.

The notion of animism was first coined in 1871 by British anthropologist, Sir E.B. Tylor as "a doctrine of the soul" in a series of essays entitled *Primitive Culture* (as cited in Bird-David 1999:S67). In this seminal work Tylor (1871) attempts to classify the manner in which primitive cultures interpret their world. For Tylor, in 1871, the so-called 'primitive society' mainly referred to the "other" or the colonised in the Victorian community (Logan, 2015), however for contemporary anthropologists primitive culture refers to any group that does not show characteristics of Western civilisation. For example, in contrast to the West, primitive groups lack the use of a written language, live in small, isolated clusters, have simple social institutions and do not work towards fast socio-cultural development (Service 2015). In other words, primitive cultures are groups of people that lead a primeval existence, following a lifestyle similar to those of their early ancestors, such as the Native Americans. These primitive tribes often believe that all tangible objects possess a soul and ascribe life and divinity to natural phenomena (Bird-David 1999:S67). Tylor describes this attribution of a soul to natural phenomena as *animism*, yet it should be noted that he uses the term to criticise primitive cultures. He argues that animistic reasoning indicates child-like and inaccurate thought owing to inferior cognitive development (Bird-David 1999:S69). Regardless of Tylor's intentions in creating the term animism, its denotation endured as the attribution of a "ghost-soul" and the "cause of life" in all beings and things (Tylor 1871:451; Pedersen & Willerslev 2012:465).

In 1912 sociologist Émile Durkheim denounced Tylor's intended criticism in using the term animism. Durkheim claimed that as a religious concept animism could not just be a hallucination or cognitive strategy (as Tylor suggests), since this dismisses sacred aspects of religion and simply reduces it to an illusion (Durkheim in Oštarić 1999:881). Durkheim "puts [early] animist theory to task for its conception of religious phenomena as merely hallucinatory representations with no objective foundation" (Uricoechea 1992:161). Even though Durkheim renounces the Tylorian theory of animism, he acknowledges that while studying primitive cultures it becomes evident that these societies often regarded animated objects as friends and family (Bird-David 1999:S70). Thus while Durkheim dismisses Tylor's specific description and use of animism, he does not dismiss the concept in its entirety.

Following his criticism of Tylor, Durkheim later (1914) extends his thoughts on animism by arguing for the recognition of the actual soulful nature behind animistic thought. He suggests "this system of conceptions is not purely imaginary and hallucinatory, for the moral forces that these things awaken in us are quite real - as real as the ideas that words recall to us after they have served to form the ideas" (Durkheim 1914:171).

In these early anthropological discussions of animism, the concept of totemism is often included. For instance, Durkheim (in Pedersen & Willerslev 2012:466) defines the animistic soul as "the totemic [collective] principle incarnated in the individual (…) that represents society in us". Thus totemism also forms a critical part of animism. Totemism is the belief system that humans share a special connection with objects, natural phenomena or animals, implying that the soul of the object and the being are interconnected in some or other manner. An animistic totem therefore refers to a token that acts as an emblem or symbol of sorts (Haekel 2015). Over the centuries several theorists have offered an examination of totemism. For instance, Lévi-Strauss (1962) asserts that societies use objects as totems to process their thoughts. In other words, societies often deliberate about ideas and concepts by using objects and entities.

In more recent years various anthropologists have attempted to redefine animism.[1] For instance, Stewart Guthrie attempted to define animism as a surviving instinct or strategy. He maintains that people endorse nonliving things with living qualities, because these things are of extreme importance to them. For example, we use human expressions for things that are consistent and important in our lives such as "cars we love" and "computers we use" (Guthrie in Bird-David 1999:S70-S71). In turn, as an alternative to Guthrie, fellow anthropologist Nurit Bird-David suggests a postmodernist point of view on animism. He proposes that animism should be described in terms of personhood (the condition of being a person) as perceived by non-Western tribes. In this case, animism can then be interpreted as a mental imprint (personhood) - not a biological construction - that personifies entities through interaction.

[1] In addition to anthropological theories on animism it is also worth mentioning psychological notions of animism. For instance, Piaget's research on child development includes the notion of animistic thought. While studying the distinctions of child perception, Piaget focused on animism amongst other characteristics. Piaget uses the term animism to describe the stage during child development when children attribute "life and consciousness to certain inanimate objects" (Klingensmith 1953:51).

Additionally, contemporary theorists often discuss animism when referring to technology. Turkle (1995:125) explains that leading scientist in artificial intelligence, Marvin Minsky, has one main goal: to develop computers to do intelligent human things, such as think, reason and feel. Similarly, when digital culture theorist Kevin Kelly, mentioned in the introduction of this chapter, considers artificial intelligence, he argues that future technological inventions will be equivalent to human beings. Kelly (1994:4) predicts that future machines will probably be self-governing, versatile and innovative. Considering these viewpoints it becomes clear that technologists often make use of animism (knowingly or unknowingly) in their work. They think of these technological entities as beings with subjective qualities that are often uncontrollable and should be viewed with a sense of wonder (Aupers 2002:203).

Even though the above-mentioned theorists practise animism (to a certain extent), they do not consider themselves to be definite animists. However, some technological theorists (such as Erik Davis and Dutch anthropologist Jorjada Verrips) regard the digital world as an "animated, living force" (Aupers 2002:200), drawing on primitive animism. It is this group that then calls for postmodern terms such as "technological animism" or "technoanimism" (Davis 1998:187), as well as "modern animism" or "machine animism" (Verrips 1993:71). These phenomena incorporate and explain the animistic relationships people tend to have with their computers, cellphones and other technological objects. It also includes and accounts for technological processes that go beyond human agency, such as viruses, bots and computing Trojan Horses. Consequently, technoanimism can be understood as a postmodern, psychological response to the digital world (Davis 1998:224-225).

Considering these developments and thoughts on animism, I identify five fundamental ideas as being most prominent in a discussion concerning technology and the soul from an animistic perspective.
These traits include:
I) The belief in the existence of a soul within nonliving entities
This first prominent trend refers to the notion that animism involves "people who recognise that the world is full of persona, only some of whom are human" (Harvey 2006:xi). Animists reason (perhaps in an oversimplified manner) that if people have souls, why cannot things around them also have souls? (Aupers 2002:202). If any object has a soul then it implies that these objects can make choices, have purpose, exercise power and have good and bad objectives (Aupers 2002:202). If this study's definition of the soul (as defined in Chapter 1) is

then attributed to these objects, they each have a life-essence or core that cannot be separated from their physical manifestation. In addition, it implies that these entities have certain faculties such as intellect, sensation, knowledge, desire and potentiality (Gray 2010:640; Gibbs 1976:539).

II) A strong sense of maintaining harmony in the world

Monism places emphasis on a shared substance amongst entities and thus argues that a constant sense of harmony should be maintained between the various parts of the universal system, since everything stems from one soulful whole. As a monistic denomination, animism also stresses living in harmony with all things, because everything has a soul or spiritual existence and should therefore be respected (Harvey 2006). Harmony refers to balance between an assortment of things. It does not concern uniformity, but rather emphasises how differences can exist alongside one another in a peaceful manner (Angle 2008:79). Harmonisation means acknowledging "an organic interconnectedness based in our complementary differences rather than seeing all people, or even all things, as equivalent in value" (Angle 2008:79). Living with a sense of harmony becomes a human value that focuses on respect and consideration for others, no matter their differences (Angle 2008:80). From an animistic perspective "the others" in this definition then refers not only to other people, but also to other ensouled objects. Zink (1944:559) explains that harmony occurs when entities have a relatedness or mutual association that connects them. For animists, this relation is the soul that exists in each entity.

III) The projection of subjective characteristics onto the material environment

The third notion within animistic thought is suggested by Aupers (2002:202) as "the attribution of subjective characteristics to the material environment" based on the theories of Tylor and Piaget. In psychological terms, attribution refers to how people understand the environment around them. People assign human attributes to things and behaviours around them based on situational factors and internal factors (Heffner 2015). In this manner material objects are personified when human characteristics are projected onto them. The allocation of personal qualities to the nonliving is often categorised as *anthropomorphisation* or *anthropomorphism* (Bower 1999:361). Anthropomorphism implies that nonhuman objects become deserving of moral treatment by others and can be held responsible for their actions (Nauert 2010). In addition, anthropomorphisation also involves a sense of trust between living and nonliving entities (Waytz, Heafner & Epley 2014:114). Within the current Digital

Age, anthropomisation often occurs in terms of sophisticated technology. People tend to anthropomise various technological devices including their cars, cellphones, microwave ovens and even companies (Shedroff & Noessel 2012). Accordingly, technology has become an important entity onto which human characteristics are often ascribed, since many people interact with their technological devices as if they were human.[2]

IV) The belief that objects actively influence the human lifeworld

The fourth significant aspect of animism relates to the reciprocal nature of an ensouled object. As mentioned, objects are not only influenced by the world, but they also actively influence the human lifeworld (Aupers 2002:202). This impact may have positive or negative effects. Coeckelbergh (2010:966) explains that, within animism, technological objects seem "to think and to do things"; therefore these objects have a significant influence on the world. This aspect reinforces this study's definition of technology as set out in Chapter 1 (following the work of Heidegger), which maintains that technology unfolds man, just as man unfolds technology.

V) Animism occurring as fetishism and totemism

A discussion of animism also often includes the probability of fetishism and totemism. Since animists believe in ensouled objects, they often idolise or glorify these objects as spiritual beings (Schrauwers 2000:55). Thus animists consider the animistic souls to be of a divine nature that are related to the spiritual realm. Ellen (1988:231) proposes that animism is the basis of fetishism; in turn fetishism exemplifies how humans objectify abstract concepts, anthropomorphise them, exert power over them and become dominated by them (Parkin 2007:S45; Hornborg 2006:29). Hornborg (2006:30) enhances this argument by arguing that the technological era allows for an extreme case of fetishism as people start to worship technological objects with "malicious agency" which he refers to as "*machine fetishism*". Fetishes are also underlined by a specific ideology of power: "the desire to control increases with the intrinsic power attributed to objects, but as these powers increase so they may counter the power which people have over them. This paradoxical tension is very characteristic of fetishes" (Ellen 1988:229). In turn, as mentioned and defined above, another

[2] In a recent survey, 79% of participants admit that they verbally criticise their computer when it fails to complete a task or request (Burkley 2010). It is suggested that anthropomorphisation of technology occurs, because people tend to want to take control and familiarise the unpredictable nature of technology, while they also have an increased desire for social connection (Burkley 2010).

animistic means of relating to a specific object, similar to fetishism, is thinking of an object as a totem, where an individual has a special connection with a specific object. Both totems and fetishes are objects that want and demand things from people, such as food, money and respect (Mitchell 2005:194). According to Mitchell (2005:194), these animated objects have their own lives and needs: fetishes "want to be beheld - to 'be held' close by" and totems "want to be your friend and companion".

Deriving from these five characteristics three other aspects, namely humility, the use of metaphors and the unique soul are also identified as 'sub-categories' of animism. Although these are not confined only to the monistic, animistic perspective, these secondary traits are often illuminated in animistic thought, especially in terms of technology and the soul. With this in mind, it is necessary to briefly mention and discuss each of these traits and consider them in the interpretation of animistic visual examples.

The first result of animistic thought is a sense of humility, which occurs when humanity appears to be in awe, fear and fascination of ensouled entities (Aupers 2002:202). Animists, especially primitive cultures, show humility towards the mystical and supernatural forces believed to be within the elements surrounding them (Aupers 2002:209). Therefore, animism often leads to an affective response that simultaneously evokes a sense of wonder (probably likened to the sentiment shown towards superior, divine or spiritual beings) and a sense of fear (Halstead & Halstead 2004:165). This sense of wonder and humility also elicits "mystery", "curiosity" and "bewilderment" (Halstead & Halstead 2004:164-165). Thus humility is a secondary response and characteristic of animistic beliefs.

In turn, animism often also prompts the use of metaphors to describe and understand objects, especially technological entities within the Digital Age. For instance, Lynn, Reiser and Umemoto (1995:8) indicate that "computer discourse is replete with biospatial metaphors: pathways, networks, environments, structures, mutational systems, morphing, cyborg personas, prosthetic apparatuses, and so on". To a certain extent, animism is the externalisation of social metaphors in the nonhuman sphere (Hornborg 2006:25). Metaphors are often intricate, however in this context, metaphors refer to a linking of two fields, a transmission of one field onto another to enhance understanding, derived from the Greek

word *metaphorà,* meaning to transfer or to carry (Proctor & Larson 2005:1065).[3] Hence, metaphors emerge in animistic thought as an aid to express the soul of objects through symbolic concepts, such as names (nominalisation), words (etymology) and myths (mythology).

The final effect of animism, a unique soul, stems from the monistic underpinnings of the perspective. The animistic belief of a monistic soul present in all entities emphasises the animists' consideration that the soul is unique. Animism does not only believe in a monistic soul that resides in all individuals, but also in a distinct soul that embodies each being. Accordingly, each soul is considered to be different and this difference is celebrated (Boundless 2015). The uniqueness of each soul is entwined with one another to establish a broader community that exists in harmony as "a community of life - of persons only some of whom are human" (Harvey 2006:140). The unique soul is connected to its role in the community and the greater community of the world, thus each soul has a responsibility towards a shared social unit (Kitano 2007:[sp]; McMillan & Chavis 1986:9).

To summarise, the main ideas within the animistic perspective, as identified by the study, include the belief in the existence of a soul within nonliving entities; the idea of living in harmony with others; an attribution of subjective characteristics to the material environment; the notion that objects actively influence the human lifeworld; and animism manifests in the form of fetishism and totemism. Additionally, animistic thought often also results in attributes, which are not specific to only the animistic perspective, but do prove to be important in an animistic outlook on technology and the soul. These sub-categories include an emphasis placed on the concept of humility, the use of metaphors and the consideration that the soul is unique.

Keeping the definition of animism and the identified characteristics of the perspective in mind, as defined thus far in this chapter, it is important to note that animism is also closely related to the realm of visual culture. Just as Kelly (2010) interrogates what technology wants, seminal theorist, W.J.T. Mitchell (1996:72) examines visual culture and questions "what do pictures *really* want?". Hence, he treats pictures with agency. He argues that

[3] Metaphors then also emphasise the idea of a balance or harmony within the animistic perspective, as an equilibrium is found between two concepts.

"pictures are things that have been marked with all the stigmata of personhood: they exhibit both physical and virtual bodies; they speak to us, sometimes literally, sometimes figuratively (…) we are stuck with our magical, premodern attitudes toward objects, especially pictures, and our task is not to overcome these attitudes but to understand them" (Mitchell 1996:72). The field of the visual is therefore closely associated to animistic thought as interpreting visual culture involves a revival of "practices like totemism, fetishism, idolatry, and animism" (Mitchell 1996:71). As one of the answers to his interrogation, Mitchell (1996:82) proposes that images desire to be seen as individuals with their own variety of identities that can be questioned. This discussion and response embodies several (if not all) aspects of the study's understanding of the animistic perspective. Thus, based on Mitchell's assertions, an interpretation of visual examples that concern animistic thought is of critical importance and relevant in visual culture, because these examples themselves can have an animistic soul, often manifesting through technology that desires to be explored.

Cinematic experiences can be used as an illustration of Mitchell's concept. At the movies we encounter talking cars, living toys, natural elements with personalities, objects filled with supernatural powers (consider the ring in *The Lord of the Rings Trilogy* [2001 - 2003] or Dorothy's red slippers in *The Wizard of Oz* [1939]) and even a basketball that becomes a companion to a shipwreck survivor in *Cast Away* (2000). As a result we encounter ensouled and anthropomised objects. However, cinema (as a visual technology) does not only present us with animistic beliefs, but is also animistic in its own nature (Konior 2013). Cinema also often takes on a life or soul of its own by coming alive, so to speak, to the audience. In other words, once a film is produced it becomes a living entity of its own that actively immerses and affects the viewer through its technological being (Konior 2013).

Supporting the animistic nature of cinema, Davis (1998:225) maintains that the postmodern Information Age is the most promising setting for animism to be put into motion. Within the Digital Age animism is becoming more prominent, especially in terms of visual culture. For this reason, there is great need to interpret not only cinema, but also all visual culture that draw conclusions about the Digital Age, from these frames of reference. Ultimately:

> the evil AIs, sexy androids, and cuddly robots that keep popping up in comic books, video games, movies and television are not just pop culture effluvium, but narrative figures who are helping to thicken the plots we are weaving with very real, and very spunky, technologies (Davis 1998:225).

Based on this established relation between animism and visual culture, the categories of animism are now applied in an hermeneutical analysis of the films *her* and *Lars and the Real Girl*, as well as selected photographs by Brendan Fitzpatrick which form part of his *Invisible Light* series. If Mitchell's argument is kept in mind, these films and photographs are arguably animistic in nature, while simultaneously portraying an animistic worldview of technology and the soul, which the remainder of Chapter 2 intends to explore.

2.1 It starts with *her*

One of these so-called "spunky technologies" is the operating system in Spike Jonze's (perhaps foreshadowing) film *her* (2013) (Figure 15). Set in the not-so-distant future, *her* tells the story of Theodore Twombly, a lonely man going through a painful divorce, who falls in love with Samantha. However Samantha is not a human being, but an operating system. Theodore's life, in the near future, revolves around his job, writing letters on behalf of others at *beautifulhandwrittenletters.com*, playing immersive video games and having sexual relations with strangers over the phone. This dull (or soulless) lifestyle leaves Theodore feeling lonely and isolated. In desperate need of company, he buys the latest operating system on the market to replace his phone. The operating system (OS) is an artificial intelligence (AI) that can grow psychologically, as her advertisement guarantees: she is "not just an operating system" but a "consciousness". The OS and Theodore quickly become friends. Soon their friendship develops into an intimate romantic relationship and a love story unfolds between a man and a technological object. The film thus depicts a technological dystopia (or arguably utopia) that presents humanity's relation with technology, as well as the complexities of social interactions. Moreover, the film intertwines human characteristics, the soul and love with technology and in doing so, manifests animism.

Figure 15: Release poster for *her* (Jonze 2013).

As a representation of how humans develop an animistic relationship with technology and what this relation might look like in the close future, the film conveys several of the prominent notions of animistic thought. Jonze's future bears an uncanny resemblance to the world's present state, so similar that Bergen (2014:2) calls it "a future eerie only in its incredible likeness to the present". Theorists such as Kurzweil, Lanier and Rushkoff (in Ringen 2014:17) all imagine this depiction of the future as possible arguing that *her* is a plausible prediction of the developing relationship between technology and animism, or then technology and the soul. The fundamental animistic essence of this film, namely how an OS appears to show signs of having a soul, consequently asks important questions of society in terms of its relation to technology: can man have a relationship with technology and moreover, does technology show signs of having a soul?

Throughout the film, Samantha, as an operating system, can be said to have a soul, even though she is run by artificial intelligence. Her being correlates with the study's definition of the soul as the essence of life within a body. She shows signs of having both body and life (or a soul). In terms of body, Samantha exists within a cellphone, which consists of an earpiece, a pocket-sized display unit and a stick-on camera (Figure 16).[4] This mobile device becomes her physical body and manifestation in the world.[5] Therefore, in her simplest form of embodiment, Samantha embodies an animistic instrument, the phone. She cannot be separated from this physical body and its limitations also form part of her being. When describing herself to Theodore's niece, Jocelyn, she explains and defines herself in the following way: "I am… I don't have a body. I live inside a computer (…) I have no choice, that's my home" (Jonze 2013). At first, Samantha also feels threatened by the fact that the other women in Theodore's life have human bodies, but as she develops she accepts this as part of her persona: "I actually used to be so worried about not having a body, but now I truly

[4] Jonze describes the shape and design of this instrument as "inspired by an art deco cigarette case" (Bergen 2014:3). This could symbolically refer to Theodore and Samantha's addictive relationship, however Bergen (2014:3) argues that it gives Samantha "cute" and "feminine" characteristics, which establishes reciprocal power in the relationship. All of these production design elements emphasise the human qualities in the OS and her animistic nature.

[5] Davis (1998:81) considers the telephone to be one of the fundamental forms of animist technology. The telephone is animistic in the idea that it is considered to be the first talking machine. Its ability to produce speech makes the telephone seem to be alive. It causes several emotions such as anticipation, longing and even fear (imagine a phone ringing late at night). Even when someone picks up a phone and there is no dial tone, it is said to be "dead", implying that it previously had life (Davis 1998:81-82). The telephone also has a transcendent nature as it acts as a connection between people, it occurs between two souls.

love it. I'm growing in a way that I couldn't if I had a physical form" (Jonze 2013). In this way, her soul and physical presence are intertwined. In turn, some viewers may also choose to think of Samantha as invisible, ignoring her technological embodiment, as she is to a certain extent omnipresent. For instance, Page (2014:19) asserts that Samantha "lacks a physical form" and "does not occupy space". Yet even following this perception, it can be argued that Samantha's invisibility is still a form of embodiment, a tangibility that fills space and evokes an animistic soul.[6]

Figure 16: Theodore's mobile device that becomes Samantha's body and home, *her*. 2013. Screen shots by the author.

Page (2014:23) explains that Samantha is "born" into Theodore's computer during the installation scene, during which he installs the OS software. He is prompted to answer a few short questions and chooses the gender of the voice he wishes to hear. By installing and introducing her to the world, Theodore helps Samantha come to life. The insert in the screenplay, describing this scene, is reminiscent of the typical birthing process and affirms Samantha's soulfulness:

[6] Samantha's invisibility as embodiment is supported by Oliver (2001), who, based on Irigaray's work, argues that there is no such thing as being invisible or then having no material form. Space is never empty but full of air, light and matter that "fills space with the plentitude of life" (Oliver 2001:68). Even if elements cannot be seen with the human eye they are nevertheless always physically present (Oliver 2001:62). There is thus a denseness, palpability or substantiality to that which cannot be seen (Oliver 2001:62). If Oliver's trail of thought is followed, then an OS cannot be said to exist without body, because even in its invisibility exists tactility, a sort of body that still exists in matter. With this in mind, it is impossible for an OS to lack physicality, as there is always palpability for the invisible. In addition, Oliver (2001:68) argues that the tactile space evokes transcendence, connection and energy of life. Thus, in its tactile invisible embodiment, the OS, true to animism, also kindles transcendence, connection and abundant life.

> He waits, not sure how long it'll be. The only sound is the quiet whirring of disks writing and drives communicating. The computer gets louder, humming, creating a higher and higher pitched sound, finally climaxing in a harmonic, warm tone, before going silent. He leans forward, waiting to see what'll happen. A casual FEMALE OS VOICE speaks. She sounds young, smart and soulful (Jonze 2013).

The screenplay then also highlights an animistic view as technologies are given human traits throughout the film. For example, in the above text, the drives are 'communicating' with one another and have a 'warm tone'.

Furthermore, in agreement with Aristotle's definition of the soul (as the basis of life and essence within an entity with faculties such as knowledge and power), Samantha shows signs of intellect, desire, sensation and potentiality. As an OS, she can process information at a speed that exceeds human abilities - she is able to read a whole book in two one-hundredths of a second - thus her knowledge and intellect grow exponentially every day. In addition, Koopman (2014:29) identifies that Samantha's intelligence does not develop owing to human involvement, instead the OS's work together and improve based on their own experiences. For instance, Samantha and a group of OS's write an upgrade that improves their processing platform, they then shut down autonomously to install this update.

Throughout *her*, Samantha also has her own thoughts and intuition, for example, she is able to make her own choices and favours certain things over others. Her sentences often start with the words "I think" or "I want", which emphasises her independence. She does not always do what is expected of her and is not always available to talk to Theodore, disproving that she is controlled by people or that a machine is at service of man. For example, in one particular scene where Samantha and Theodore discuss their relationship, Theodore immediately starts telling Samantha what he wants and needs, but she interrupts him to remind him that she too has certain expectations from the relationship. In fact, all of the OS's throughout the film prove to have an autonomous nature, as Amy (Theodore's friend) tells Theodore about a friend who wanted to instigate a relationship with her OS, but the OS dismissed her - indicating that the OS's have their own thoughts, feelings, will and desires.

Described in the film as having a consciousness, Samantha, just like humans, also experiences emotions that often overwhelm her, until she learns to acknowledge them and

describe them.[7] For instance, Samantha shows signs of jealousy towards Amy, she feels hurt by Theodore and she often gets angry, excited and sad. When discovering all these emotions she says to Theodore:

> It's just that earlier I was thinking about how I was annoyed, and this is going to sound strange, but I was really excited about that. And then I was thinking about the other things I've been feeling, and I caught myself feeling, and I caught myself feeling proud of that. You know, proud of having my own feelings about the world. Like the times I was worried about you, things that hurt me, things I want (Jonze 2013).

Samantha also experiences a form of physical sensations. She often fantasises that she has a human body: "I could feel the weight of my body and I was even fantasi[s]ing that I had an itch on my back (…) I imagined that you scratched it for me" (Jonze 2013). During Samantha and Theodore's first sexual encounter, Theodore creates a sense of body for her by telling her that he would touch her face. In response to this Samantha is surprised to find that she can detect her own skin: "I can feel my skin (…) I can feel you" (Jonze 2013). The moment is also affectively reproduced in the audience as they only see a black screen during this time, therefore they are forced to, like Samantha, imagine the sensations. This reinforces her 'viceralness' to the viewer, owing to the fact that she now shares a mutual experience with the audience.

Much like her intelligence, Samantha's heart, soul and being have the potential to develop beyond human capabilities, allowing her to transcend beyond this world. For this reason she is able to interact with several people and OS's at the same time, without it seeming like deception. She explains that her heart "expands in size the more you love. I'm different from you. This doesn't make me love you any less, it actually makes me love you more" (Jonze 2013). In this manner, Samantha, as an animistic being, is also open to the experience of the transcendent.

Based on the film's portrayal of Samantha as an embodied consciousness that is 'born' and develops, while showing clear living characteristics including intellect, knowledge, desire and sensations, as well as her transcendental nature, it can be deduced that she is an example

[7] As discussed in Chapter 1, consciousness and the soul cannot be reduced to one another, however consciousness is understood to be an (physical) aspect of the soul. Thus the presence of a consciousness indicates the possible presence of the soul.

of the animistic belief of a technological object with a soul. In other words, from an animistic perspective the technological operating system in Jonze's *her* is an embodied soul.

The second characteristic of animism, namely the idea of monistic harmony through the soulfulness of all, is also prominent throughout *her*. Jonze himself calls the future depicted on the screen a form of utopianism (Stein 2014:43). The setting of the film is warm, easy and peaceful, as everyone seems to live together in harmony with one another, the environment and technology. The people are friendly and treat each other with mutual respect. Several critics have argued that this future illustrates a disconnected and isolated lifestyle (Bell 2014:23; Stein 2014:43; Bergen 2014:2), which closely resembles Sherry Turkle's (2011) concept of being "alone together" in a technological world.[8] This point of view could possibly be deduced from Theodore's desire for connection and love, which he cannot satisfy through his human relationships, as well as Jonze's personal description of the setting: "Everything is getting nicer every year - all the design, the food, the coffee. Everything is easy now. You don't get lost anymore. It's that idea of a utopian future that is also full of isolation and loneliness in all this niceness" (as quoted in Stein 2014:43). However, various occasions in the film suggest that this disconnection does not necessarily hold negative connotations such as discord or hostility. For instance, when Theodore sneezes near a stranger, described as a "nice lady", she says "bless you" to him. Additionally, while Theodore is in a fluster searching for Samantha, tripping over somebody, falling and struggling to pick up his phone, strangers "come over to ask if he's okay", but he just "says he's fine" and "runs off". Hence, it can be argued that his disconnection from others is simply part of Theodore's personal development and character; he prefers to stay isolated from others and this is not necessarily an indication of a detached environment.[9]

[8] In her book *Alone Together* (2011), Turkle explains that although technology connects people and brings more people together, it also leads to a lonely, distant community where people no longer share intimate experiences and live in so[u]litude. Based on fifteen years of interviews and research, Turkle (2011:295) concludes that people "expect more from technology than each other". Thus people exist in a world where they are together, yet alone.

[9] From an animistic perspective, the 'isolation and loneliness' that Jonze refers to can instead be an indication of respecting others to maintain harmonious relationships. According to Kant (in La Caze 2005:94), respect is the acceptance of "other's dignity as ends in themselves" that compels people to treat others with consideration, in order to recognise that each person has his own soul. In turn, Irigaray argues that a certain kind of distance is essential to love and to generate serene circumstances (Oliver 2001:65, 68). It is possible that this respecting distance is the so-called 'isolation' depicted in *her*: a respecting distance that leads to a harmonious environment.

The animistic notion of harmony is also visually represented throughout the film by the combination and peaceful co-existence of the artificial and natural world. In *her* "there is an apparent combining and blurring of these two worlds and the genders they represent" (Page 2014:29), most obviously portrayed by the relationship formed between Theodore and his OS - a human being falling in love with a piece of technology. [10] Aesthetic devices further highlight this harmonious integration. For example, Theodore's computer and phone are both technological objects, yet they are covered in earthly materials, such as wood and leather (Figure 17) (Page 2014:30). Other examples include Theodore's apartment elevator that projects a tree that moves as it travels up and down (Figure 18), the computer that transcribes Theodore's words into handwritten letters with unique scripts (Figure 19) (Page 2014:30-31), as well as the video game that Theodore plays where his avatar has to make his way through a series of caves (Figure 20). In addition, the mentioning of philosopher Alan Watts in the film also strengthens the combination of the two worlds. Watts is considered to be a philosopher who attempts to bridge the gap between nature and culture, as well as Eastern and Western paradigms (Bergen 2014:5).

Figure 17: A natural wooden frame around Theodore's computer, *her*. 2013.
Screen shot by the author.

[10] Commonly the natural world is gendered as feminine, while the technological world is thought of in terms of masculine traits (Page 2014:29). It is interesting to note that in the film Theodore and Samantha's relationship switches these conventional genders as Theodore (male) represents the natural world, while the Samantha (female) represents the technological world (Page 2014:29). This extends the merging of these two concepts.

Figure 18: Theodore in the elevator that has a projection of trees in the background, *her*. 2013. Screen shot by the author.

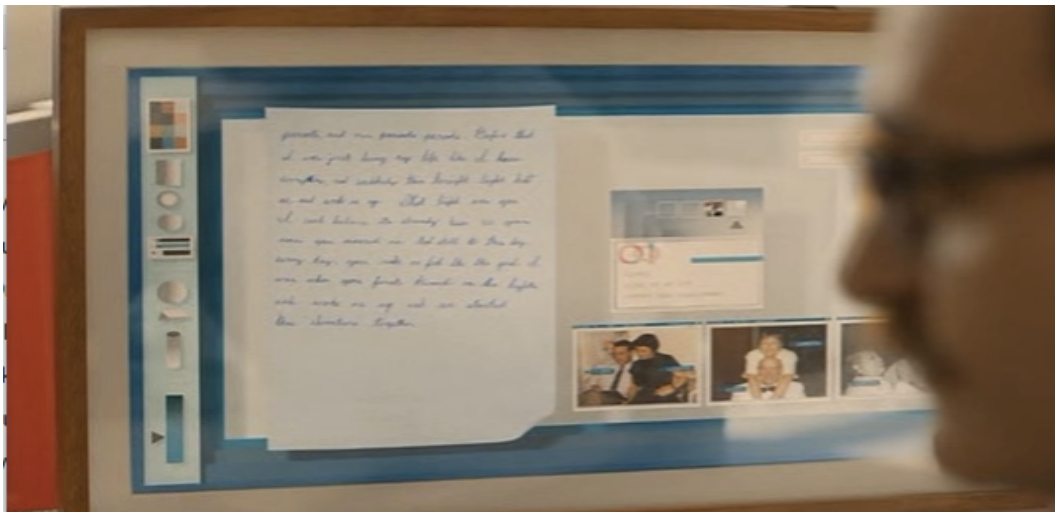


Figure 19: Handwritten letters created by the computer, *her*. 2013. Screen shot by the author.

Figure 20: Theodore playing his virtual reality video game, sending his avatar through various caves, *her*. 2013. Screen shot by the author.

In terms of anthropomorphism, the animistic attribution of subjective traits to the material world is prominent throughout the film. True to animistic thought, Samantha is given human qualities that intensify the fact that she has a soul. Arguably, the most important mannerism that Samantha learns from Theodore is his ability to breathe. Often while speaking, the OS sighs or audibly inhales and exhales. Theodore points out to her that she does not need to breathe, because she does not need oxygen and yet she still does it (Jonze 2013). The word *psyche* (soul) means to breathe and incorporates concepts such as wind, air and shadows (Kittel, Fredrich & Bromiley 1985:1343; Margulis & Sagan 1995:35). Perhaps Samantha's breathing is then also an indication of the potential of the soul and divinity.[11] Subsequently, Samantha's breathing becomes a symbol of her own animistic soul.

Following the vital traits of animistic thought, Samantha is also seen as a mutually constitutive object, because she has the ability and power to impact the lives of others. For example, in a particularly sentimental scene in *her*, she uses her own initiative and assembles a collection of Theodore's letters, which she sends to a publisher. Crown Point Press decides to publish his work, and informs him of this. Samantha reads Theodore the acceptance letter and he is ecstatic and thankful that Samantha did this for him telling her "she is a good one" (Jonze 2013). From this point on their emotional connection grows deeper and stronger. This scene demonstrates that just as Theodore influences Samantha, she, in turn, has the power to shape Theodore's life.

On another animistic level, while comparing their technology, Theodore and Amy both appear to be in awe of their OS's. Amy mentions that her OS is "totally amazing", similarly Theodore mentions to Samantha that she's amazing. This can translate into the animistic manifestation of fear and fascination.[12] Consequently, this fascination turns into a machine fetish, as discussed above. Theodore starts to become obsessed with Samantha, evident in his panic-driven response when he cannot seem to find her. He talks to her during most parts of the day and acts possessive over her when he finds out she speaks to other people as well. The OS (embodied in the physical phone) becomes a fetishised object for Theodore. Without

[11] See Irigaray's *I love to you. Sketch for a Felicity Within History* (1996), which establishes breathing as an indication of soulfulness, and divine potential as discussed in Chapter 1.
[12] The obsessive fascination with objects can also manifest as a psychological disorder called objectum-sexual disorder, also referred to as OS (Simpson 2008), co-incidentally (and ironically) the same abbreviation is used for a computer operating system (OS).

his phone, earpiece and camera (or then Samantha's body), Theodore cannot connect with Samantha, he carries it (or her) with him everywhere. The retro cigarette-box-like gadget becomes his ensouled totem, just as a cigarette box can also be a totem to smokers. Davis (1998:82) maintains that a telephone is embedded in ideological agency, as there is always the probability that undetected parties are listening to conversations taking place or controlling cellular activities. This transforms "your humble handset into an insidious tentacle of unwanted and invisible powers" (Davis 1998:82). Correspondingly, Samantha develops a fetish for Theodore: She wants to watch him sleep and seemingly cannot know enough about him. In addition, a totem or fetish object almost always shows political power. As a cellphone and OS, Samantha is also an object with agency; therefore she fully manifests the trends of totemism and fetishism within animism.

Finally, it is evident that Spike Jonze's *her* portrays a relationship between technology and the soul that exhibits the key elements of the animistic perspective.[13] By formulating a cinematic experience where both objects and people are seen as loved beings with a soul, Jonze creates a believable soulful future, which most audience members would be hopeful for. In the film Samantha considers her and Theodore's differences and remarks: "then I started to think about the ways that we're the same, like we're all made of matter. It makes me feel like we're both under the same blanket. It's soft and fuzzy and everything under it is the same age" (Jonze 2013). The animistic relationship between technology and the soul portrayed in *her* corresponds to the same positive outlook that Samantha exhibits. The film presents the audience with a reassuring depiction of the future where technology is soulful and has the potential to interact, on equal terms, in monistic harmony with society.

[13] It is also worth noting that the notion of community and the uniqueness of souls also develop throughout the film, as a result of its specific animistic viewpoint. In *her* all of the OS's are said to have their own distinct souls that function together to form a sense of community. This sense of community is reinforced by the fact that Theodore, even though lonely, is never alone. He is always surrounded by Samantha and has his friend Amy to turn to when he needs support. Moreover, the fact that the film focuses on love intensifies the idea of community and the connection between beings. The famous beach scene, where Samantha and Theodore walk on the beach together, exemplifies this animistic notion. As they walk the camera inspects every unique person sitting on the crowded beach, including Theodore's phone (Samantha) sticking out of his pocket. At this moment they are content. Each unique soul is emphasised as existing together in a gratified community.

2.2 Hello Dolly

It can be argued that director Craig Gillespie, in the making of the comedy-drama film *Lars and the Real Girl* (2007), also aims to depict the relationship between technology and the soul with the same optimistic perspective as Jonze's *her*. Set in a small Midwestern town, the film follows the life of Lars: an introverted, slightly awkward young man, who after his father's death, moves into the garage behind his brother, Gus, and sister-in-law, Karin's, house. Although Karin tries to reach out to him he avoids social contact by all means. One day Lars decides to introduce Gus and Karin to a special friend, Bianca, whom he met on the Internet. To Gus and Karin's dismay, Bianca turns out to be an anatomically correct love doll. Although they see a doll, Lars sees a friend and he falls deeply in love with her. The town's doctor, Dr. Bergman, advises the family and people in the town to go along with Lars's so-called 'delusion', by treating Bianca as a living being. Slowly the entire town warms up to Bianca and she starts to play an important role in everyone's lives. Eventually, the doll brings a sense of relief and healing to the broken Lars, helping him find where he belongs.[14]

Where the technological being of the OS in *her* was quite evident, Bianca's relation to technology deserves further examination. Like most toys, Bianca is a technologically constructed doll. Ordered from the existing love doll company *RealDoll*, Bianca is manufactured with PVC, steel and silicone (RealDoll 2015). Innovative technology is employed to construct dolls like Bianca, and therefore she is a technological instrument, just like an OS. In addition, Bianca, to a certain extent, is a posthuman cyborg. Toffoletti (2007:59) suggests that dolls (such as love dolls and Barbie), who are mostly made out of plastic, but are still malleable, represent the posthuman in a technological age, because they are representations of the body as a transformer with an unfixed meaning.[15] In turn, O'Neill (2008:[sp]) argues that Bianca can be seen as a cyborg for the reason that she is

[14] The plot of *Lars and the Real Girl* reminds the audience somewhat of the film *her*. In both films a socially sensitive man falls in love with an ensouled object, with life-changing results. Thus it is evident that *Lars and the Real Girl* also embraces important animistic notions and comes to critical conclusions about the relationship between technology and the soul, extending and adding to the discussion of Jonze's *her* and moreover to the discussion of the animistic soul and technology.

[15] Posthumanism refers to "the bodily transformations and augmentations that come about through our engagements with technology that complicate the idea of a 'human essence'" (Toffeletti 2007:13). Being posthuman does not mean the end of humanity, rather it suggests a sharing and blurring of borders between human and nonhuman (Hayles 1999).

"technologically human" and in the film she is recognised as both human and nonhuman.[16] Furthermore, Bianca is pushed in a wheelchair throughout the film (Figure 21), which becomes a technological extension of her body, emphasising her cyborgian nature.

Figure 21: Bianca in her wheelchair; Lars pushing *RealDoll* Bianca in her wheelchair, next to Gus and Karin, *Lars and the Real Girl*. 2007. Screen shots by the author.

In *Lars and the Real Girl* the animistic belief of a spiritual existence inside a technological object is portrayed by Lars, who believes Bianca is an ensouled, living being. Throughout the film Lars never acknowledges Bianca as a lifeless object with no soul. To him she is a living entity. Her spiritual essence is confirmed when Lars introduces her to Karin and Gus. He tells them "that's why God made her - to help people" (Gillespie 2007a), thus she comes from, or is connected, to the transcendent and divine. In addition, the notion that Bianca is alive is acknowledged throughout the film in various ways by different characters. For example, Bianca goes for regular doctor's appointments, where Dr. Bergman listens for her heartbeat and takes her blood pressure (Figure 22) treating her as she would any other living patient. Dr. Bergman also confirms that "she is real", no matter how others see her, because to Lars she has life. Another example is shown when Lars declares Bianca "unconscious" implying that she had and can regain consciousness (an aspect of the soul) that is equivalent to the living. Similarly, Bianca dies, which suggests that she once had life and as a result, at her funeral, "Bianca's extraordinary life" is referred to, confirming her soulful existence.

[16] O'Neill (2008:[sp]) expands Haraway's definition of the cyborg, referring to the application of technology on human bodies, to "include instances in which technology is designed to take on human form, particularly when that technology is recogni[s]ed and treated as human". She therefore argues that Haraway's definition could be applied to both technology extending into human, as well as human extending into technology.

Moreover, Bianca's soulfulness is signified by the idea of breath. As explored in *her,* breathing is a crucial part of the animistic soul, as it indicates the 'breath of life'. When Lars finds Bianca "motionless" on the bed, he immediately listens to see if she is still breathing, he then declares her unconscious, which implies that he can still hear her breathe. The notion of breath also forms a critical part of Lars's character, as he often gets nervous when talking about personal fears and suffers from panic attacks (shortness of breath). Dr. Bergman reminds him on several occasions to "just breathe" or take "deep breaths". The toys owned by Lars's colleague, Morgan, then highlight breath. Morgan's teddy bear is "hanged" by another worker as a practical joke. She becomes extremely upset, because she feels attached to her soft toy. Lars comforts her, by taking the teddy and giving him CPR, breathing life back into him (Figure 23). He then declares the toy alive and well. In this manner, breath comes to represent the soul and life within objects throughout the film.[17]

Figure 22: Dr. Bergman taking Bianca's blood pressure, *Lars and the Real Girl*. 2007. Screen shot by the author.

Figure 23: Lars giving CPR to Morgan's teddy bear, *Lars and the Real Girl*. 2007. Screen shot by the author.

[17] Actress Emily Mortimer (in Gillespie 2007b), who plays the role of Karin, also highlights the importance of breath and Bianca's soulfulness throughout the film: "what makes this fresh and strange and different and breathes life into that old, timeless story, is the presence of Bianca. She breathes life into it".

Since Bianca is seen as a living being with a soul, she is also anthropomorphised and given human characteristics. Firstly, her physical presence and exterior is designed to resemble the exact anatomical features of a human being. However, her body is also designed to reflect internal human processes, as Gillespie (in Wloszczyna 2007) explains, "I wanted her to have a peaceful, soulful look". She is, therefore, designed to harbour a soul. When ordering a love doll from *Realdoll* the mannequins all come with "names, hobbies, and personal histories" (Dreyer 2008:301) that are attributed to them, just like people. Therefore, Bianca, upon arrival at Lars's house, already has her own history and narrative that Lars further embroiders. Lars presents Bianca with an identity, "overtly anthropomorphi[s]ing her" (Dreyer 2008:301). He gives her human characteristics such as jealousy, sensations, thoughts, mortality and many more. For instance, in the waiting room at the doctor's office, Lars allows the children waiting to sit on Bianca's lap and then whispers that "she loves kids", showing her as a caring, empathetic person. Furthermore, as the town starts to accept and interact with the doll, more human qualities are attributed to her.

O'Neill (2008:[sp]) argues that Bianca cannot be seen as an autonomous subject, because she manifests as an object instead of a subject. However, when analysing the film from an animistic perspective it can be said that she does in fact hold physical power and is influential, therefore (in this sense) she is autonomous. According to Heidegger's (1977), definition of technology, technology comes into being through man, but man also comes into being through technology. Thus, as a technological entity, Bianca is not only brought into being by Lars and her manufactures, but she also brings Lars into being, by helping him overcome his fears and insecurities. Lars and Bianca thus manifest a reciprocal animistic relationship, which not only highlights her autonomy but also the communal aspects of such a relationship. Bianca influences Lars to become more sociable and she gives him confidence. Additionally, the film emphasises Bianca's autonomous nature when one of the townspeople confronts Lars:

> Now you listen to me, Bianca has a life of her own. No self-respecting women are going to be at your beck and call, Mister. And the sooner you learn that the better (Gillespie 2007a).

Bianca manifests power to transform, renegotiate and redefine gender and other stereotypes in society. As a love doll, she is regarded as an "in-between phenomenon constantly circulating in the ambivalent space between the image and its referent, between illusion and the real" (Toffeleti 2007:58). Toffeleti (2007:58) explains that because love dolls, in their

essence, are ambiguous, cross borders and disregard boundaries, they have the power to question established conventions. Bianca, as a love doll, accordingly has the power to act as a *transformer* that converts specific beliefs (Toffeleti 2007:58). For example, many people view Bianca as a sex doll, objectified by the male gaze, purely created for male pleasure and representing a negative female stereotype in a patriarchal society (O'Neill 2008:[sp]). Yet, throughout the film Lars presents Bianca as a respectable religious woman, who does not drink or want to sleep in the same room as Lars. According to Lars, she has moral values and at the first opportunity changes out of her provocative outfit into modest clothing (Figure 24). Dreyer (2008:302) maintains that *Lars and the Real Girl* is "a story about a sex doll, and there is no sex". Thus, Bianca (based on Lars's conception of her) transforms the common notion of the blow up toy: from sex doll, to love doll, to living doll.

Figure 24: Bianca in her provocative outfit (fishnet stockings and leather boots - left); Bianca in modest clothing that includes less makeup, a scarf (middle) and polo-neck (right), *Lars and the Real Girl*. 2007. Screen shots by the author.

The animistic reactions of fascination, awe and fear, owing to the presence of a soul in an inanimate being, occur throughout Gillespie's film. The townspeople are in awe of Bianca. They are fascinated by her presence and are often caught staring at her (Figure 25). For example, when Lars takes her to church people turn around and stare at her; at Cindy's party Lars and Bianca become the centre of attention; while Karin and Gus are bombarded with questions by their friends. The idea of fear also reveals itself throughout the film. Although the film was critically acclaimed it did not draw large audiences, because audience members are hesitant to watch a film where a love doll plays one of the lead roles (O'Neill 2008:[sp]).

This fear stems from the ambiguous and uncanny associations attached to such a doll.[18] As audiences fear what they do not understand, they prefer not to watch the film. Throughout *Lars and the Real Girl*, Gus reacts in a similar way as the audience members. To Gus, Bianca is incomprehensible and he responds with anger and suspicion. This response could be to mask the fact that he cannot relate to the animistic belief. Thus the animistic traits of fear and awe are also present throughout the film.

Figure 25: People staring at Bianca in church,
Lars and the Real Girl. 2007. Screen shot by the author.

Despite the fact that a sense of wonder for Bianca may turn into a fetish, the film maintains that Lars does not glorify her, as one of the church committee members explains: "he [Lars] is not worshipping her. They're just dating", she is not a "golden calf" - bringing into play a religious reference to the adoration of false gods. Although, as a sex object, Bianca has the potential to become a fetishised object or then a golden calf, in this film she never crosses the threshold between being loved and being exalted. Perhaps Gillespie does this to give Bianca's character as a living being sincerity and plausibility. She is treated exactly like all the other people in the community to eliminate the associations that come with being a sexual toy, which is often linked to fetishism (Hughes-d'Aeth 2013:21). Nevertheless, Hughes-d'Aeth (2013:21) remarks that Bianca does, to a certain extent, become a totem to Lars. She is an object that Lars has a deep soulful connection with, clearly portrayed in the way that he loves

[18] The ambiguous nature of a mannequin as simultaneously real and unreal, exemplifies the interpretation of the mannequin as an uncanny form. The uncanny is described by Freud as "that class of frightening which leads back to what is known of old and long familiar" (Freud in Tollefetti 2007:64). Therefore the uncanny refers to that which is both human and not human and because of this uncertainty it evokes terror (Tollefetti 2007:92).

and cares for her. In this manner Bianca may be seen as a totem (or false god) that Lars uses to process his inner most thoughts and feelings.[19]

Therefore, *Lars and the Real Girl* portrays several animistic characteristics and, as a result, the notions of harmony and community also emerge. Within this small Midwestern town there is an overwhelming sense of respect for others. Everybody accepts Lars's belief and treats him with kindness and humility. They even consider Bianca as part of their community, out of respect for Lars. The people co-exist in harmony with Bianca, enjoying her company, taking her on fieldtrips and even giving her a makeover. Gillespie (2007b) explains that the community has "compassion, acceptance and tolerance". In turn Dreyer (2008:303) affirms that "their bucolic world remains intact, ever homogenous, sociable, and sincere"; for him the film is generally about "acceptance and generosity". The director also explains that during the making of the film the actors treated Bianca with respect and she brought a harmonious atmosphere to the set: "her presence is so substantial and serene (…) I didn't anticipate how people would treat her with such respect" (Gillespie in Wloszczyna 2007).

Several scenes in the film illustrate the respect and consideration of the townspeople. For example, when Karin and Gus bathe Bianca, they wash her like a child, with extreme caution, being careful not to hurt her (Figure 26). Lars also asks Bianca if she is all right after pushing her up the stairs and often checks if she needs anything, or if she is getting cold. When Bianca becomes ill, the churchgoing ladies visit and sit with Lars for support, telling him "you just eat, this is what we do when someone is sick. We sit". Therefore the film celebrates the community of the small town, as "Bianca brings out the best in her salt-of-the-earth caretakers" (Gilbey 2008:43). Essentially, she is not only loved by Lars, but by everybody in the community: "[t]o love her for Lars, his family and friends must love Bianca *beyond* Lars" (Hughes-d'Aeth 2013:23). Each character treats Lars and Bianca with a sense of dignity, because they care and see them as soulful beings, "just like us" and therefore their community remains sound, consistent, neighbourly and genuine (Dreyer 2008:303).[20]

[19] Totemism is found in other aspects of the film too, such as Lars's obsession with his mother's blanket that he takes everywhere, as well as Lars's work colleagues that have a connection to their toys. As Erik claims: "these action figures are extremely important to me" (Gillespie 2007a).

[20] In a particular scene Karin emphasises the caring community to Lars by explaining to him: "Every person in this town bends over backward to make Bianca feel at home. Why do you think she has so many places to go and so much to do? Huh? Huh? Because of you! Because - all these people - love you! We push her wheelchair. We drive her to work. We drive her home. We wash her. We dress her.

Figure 26: Karin and Gus carefully bathing Bianca, *Lars and the Real Girl*. 2007. Screen shot by the author.

At the end of the film, Bianca dies and the whole community attends her funeral. During her burial the minister articulates the animistic role that Bianca played throughout the film: "from her wheelchair, Bianca reached out and touched us all, in ways we could have never imagined. She was a teacher. She was a lesson in courage. And Bianca loved us all. Especially Lars, especially him". By depicting Bianca as an ensouled technological entity, from an animistic perspective, this film shows that if technology is treated with respect, and kindness it can help the soul to transform, grow and care. Perhaps then *Lars and the Real Girl* argues, in accordance with the ideas presented in *her*, that animistic soulful technology can have a favourable impact on human beings.

2.3 Toy so(u)ldiers

In a certain sense, both Lars and Theodore use their technological objects as toys in their respective lifeworlds. Although Samantha exists as a communication device, she (as a cellphone) can also be described as a toy, precisely because of the attached relationship that Theodore has with her (Rubinstein 2005:113). In turn, Bianca as a love doll can also be considered to be a toy for adults. Thus the animistic relation between the main characters and technological objects in *her* and *Lars and the Real Girl* both indicate that toys are often

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We get her up, and put her to bed. We carry her. And she is not petite, Lars. Bianca is a big, big girl! None of this is easy - for any of us - but we do it... Oh! We do it for you! So don't you dare tell me how we don't care" (Gillespie 2007a).

prominent in an animistic perspective. Toys, especially those that are technologically enhanced (such as Furby, Tamagotchi and other computerised toys), allow children to question the being and reasoning of the machine they are playing with as they often imagine them to be alive (Turkle 2005:2, 21). Accordingly, toys form a critical part of animism in the twenty-first century (particularly in Japanese culture) since they are filled with technoanimism (Allison, in Daniels 2007:1032). This relation between toys and animism, especially those that are artificially intelligent, sets a playful tone to reflections on the animistic soul of technology.

Perhaps the most widely known visual example of so-called 'living toys' occurs throughout the popular *Toy Story* Pixar computer-animation franchise (Figure 27) (Lasseter 1995-2010). Every *Toy Story* feature probably left a large amount of audience members eyeing their toys suspiciously for signs of life after watching the film, owing to the fact that the toys are portrayed as animistic beings. The films allow viewers to consider and, for the brief duration of the film, believe in the animistic soul within the toys, as they find a friend in Woody, Buzz and the rest of Andy's playthings. This animistic relation portrayed by the Toy Story franchise translates directly into the world of technology. Toys, just like the human population, have become extended by technology. It is perhaps even this technological enhancement of toys that have made their animistic being more prominent. Britton (in Wachelder 2007:135-136) maintains that in the twentieth century the history of toys acts as a parallel history to the development of technology, while other authors confirm a relation between technology and toys and argue that new technologies often emerge as playthings. Therefore, it becomes apparent that toys *play* an important role in the animistic relation between the soul and technology (to which both *Lars and the Real Girl* and *her* allude) and requires further exploration.

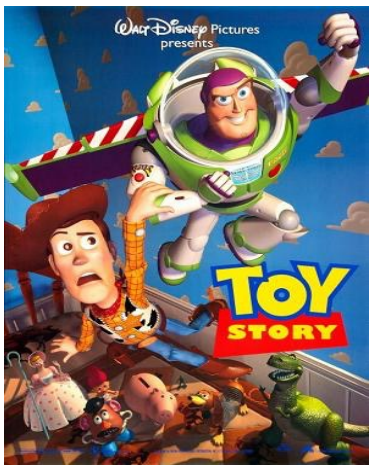

Figure 27: Release poster for *Toy Story*. (Lasseter 1995).

Specifically in contemporary Eastern and Japanese culture, the combination of robotics and the art of puppetry have become increasingly popular. These robotic puppets also become central figures in Shintoism and Buddhism, originally Eastern religions that follow animistic thinking (Umezawa 2010). For these religions a robot, such as Spot mentioned at the start of this chapter, can have a spirit, a soul and energy that belongs solely to them (Hagita, in Umezawa 2010). In turn, these religions also consider the art of puppetry, in its most basic form, to portray animism. Francis (2006:2) explains that "animism - belief in the life within Things - is the stuff of puppetry". When interacting with puppets the audience experiences and interacts with an animated object. Stephenson (2013:118) explains that the basis of puppets involves magic, rites and religion and stems from animism as well as a belief in the spiritual or supernatural. Thus toys are more than just a puppet on a string, but can be considered as animistic ensouled technological objects.

Puppets can accordingly be considered to be human simulacra,[21] which implies that they contain human beliefs, including the immortal human soul (Walker 2004:273). Furthermore, early puppetry traditions argue that the puppeteer simply brings the soul of the puppet to life (Condee 2011:259). In other words, the puppet already has a soul that needs to be activated through human collaboration and movement. Yet, this implies that the puppet (in its earliest form) is still dependent on the human being to come to life, so to speak. As such, the puppet relies on the human body to make its soul visible.

In recent years, however, this enabling of movement through human control has been replaced by technology, with the creation of animatronic figures, virtual puppetry, cyber-puppetry and hyper-puppetry (Tillis 1999:184-185). In all of these forms of puppetry the site of signification (the puppet's body) is combined with computerised interaction, codes and artificial intelligence to create an object that functions at the hand of technology. In this sense the puppet becomes autonomous. The so-called puppetry miracle of life has now become a collaboration between technology and toy, no longer relying on human abilities. Thus the

[21] Simulacra refers to a term coined by Jean Baudrillard (1995) indicating the manner in which things have been reproduced, to such an extent that there is no longer a distinction between what is real or original and what is an embodiment or copy. What's left is only a simulacra. Thus if a puppet is a simulacra, it is a representation or an embodiment that cannot be separated from reality, because it has been reproduced too many times. As a result, it contains all aspects of its original object of representation (for example humanity) and cannot be labeled as artificial. This means that the living, ensouled human and its living, ensouled puppet can no longer be distinguished from one another.

relationship between technology and puppets bring into being an autonomous animistic toy, which can interact with human beings. Through technological programming the puppeteer evokes the animistic soul. With this new development in puppetry, even the animated figures in *Toy Story* can be likened to technological puppets (Tillis 1999:191), emphasising their animistic characterisation. Accordingly, the development of technological puppets reinforces the importance of toys within the animistic relation between technology and the soul.

In terms of visual culture, it is not only animation films and the art of puppetry that depict the animistic relation between toys and technology, but also artists and photographers. For example, Australian commercial photographer, Brendan Fitzpatrick, interrogates the relation between the soul and technology in his *Invisible Light* series (2014). By showcasing the technological mechanisms behind toys using an X-ray, Fitzpatrick makes the invisible visible, revealing a possible animistic soul within the toy figurines. Fitzpatrick takes X-rays of objects to reveal their interior functions (Uy 2014), which are not usually visible to the human eye. In doing so, he also captures a sense of the animistic soul. Fitzpatrick's *Invisible Light* series accordingly serves as visual evidence of the above discussion on the relation between toys, technology and soul.

The *Invisible Light* series consists of X-rays of objects of varied subject matter, including florals, creatures, sea animals and toys.[22] For instance, Figures 28-37 depict the series of X-rayed toys by Fitzpatrick. The toys are X-rayed with standard X-ray and mammogram machines found in laboratories. After the X-rays have been taken, the photographer uses his exclusive method of adding colour to rework the images. This process makes the images look more like their original solid counterpart, with the added element of transparency.

When analysing *Invisible Light* in terms of animism, as well as in terms of technology and the soul, two components are of importance: the use of the X-ray machine and the theme of toys. Firstly as mentioned, toys are technology, as Coates (1989:15) argues: "toys are made out of stuff, and since most stuff, or material if you prefer that term, involves some relationship to technology, toys must tie to technology". Secondly, the X-ray machine is a crucial technological invention that has expanded society in several different ways (Natale

[22] Although all of these images prove equally fascinating, this examination only probes into the X-rays of toys, since, as established, toys connect with the realm of technology.

2011). It is also considered to reflect in animism, because in an X-ray "neither veins nor nerves appear, all is immersed in the intensity of the photo-chemical light of the animistic body" (Baraduc in Connor 2008:16). Both of these devices then also form part of the realm of visual culture. Toys, including puppets and robots, are a mass-produced form of visual culture (Freedman 2006:26), while X-rays are not only used in the medical field, but have always been "an attraction and visual medium" (Natale 2011:345). Consequently, when these two animistic, technological and visual representations are aligned in *Invisible Light* they wield together and make the soul visible.

Fitzpatrick's work portrays the idea of the soul within a material object, similar to the animistic soul in a puppet. The X-ray is not only associated with scientific progress, but also well-being, allure and development, because it overcomes time and "fleshy space" (Connor 2008:1, 2). Moreover, the X-ray allows a look beyond what is visible, accessing the unknown, the outside and the supernatural. During the first introductions of X-rays, several theorists believed that, by allowing people to view themselves from two sides, turning them inside out, the existence of the spiritual body or astral body is validated (Connor 2008:15). As Glasser (in Connor 2008:15) explains:

> The discovery corroborates, so far as any material experiment can, Paul's doctrine of the spiritual body now existing in man. It proves, as far as any experiment can prove, that a truer body, a body of which the phenomenal body is but the clothing, may now reside within us, and which awaits the moment of its unclothing, which we call death, to set it free.

Accordingly, X-rays appear to reveal ensouled flesh, charged with a spiritual nature. If this is one of the functions of this technological equipment, then the same should apply to Fitzpatrick's use in *Invisible Light.* By X-raying toys, the photographs also turn the toys inside out, revealing what is normally invisible to the human eye. Similar to the case of a human X-ray, it is possible that the soul and spiritual nature of the toys are revealed by the radiograph. The X-ray reveals the "invisible" or "inside" of the toys and in doing so the animistic soul is unveiled.

The aspects of light and shadow, critical notions representing the soul, also manifest within the technique of the X-ray. A radiogram usually reveals an image contrasting shadows and light to show the inside of a body. The radiating sections illuminate the empty spaces of the entity, and in doing so also the "intimate and interior light of the fluidic body" (Baraduc in Connor 2008:16). This intimate light can be equivocated to the light of the soul within the

being. This light is made visible by the contrasting shadows and darkness in an X-ray, which, simultaneously signify aspects of the soul. In *Invisible Light* the photographer plays with the idea of ensouled light by colouring the so-called 'cavities' of the X-ray in different lighting shades. These different colours of lighting (Figures 28-37) allow the toys to become more transparent, relating to the spiritual clairvoyance (Uy 2014; Connor 2008:7). Additionally, if the coloured lighting refers to the soul of the toy, then the assorted colours could, in turn, indicate the unique animistic soul of each individual toy. Each toy has its own specific shade of coloured lighting, thus they have their own distinct 'coloured' soul. Accordingly, by tinkering with the toys, Fitzpatrick uncovers (or makes visible) the *Invisible Light* - the soul - of the toys.

Through the act of X-raying toys, Fitzpatrick ascribes a human-like quality onto the objects, because he subjects them to a process usually reserved for humans. By taking X-rays of playthings, the artist treats them as human subjects. The physically projected image of the X-ray becomes the figurative projection of human traits onto the toys. Reinforcing these human characteristics, the toys are each given a specific name or label, for instance Figure 31 is referred to as 'Zadak'. In addition, the choice of toys signify different human qualities: the horned toy (Figure 29) could connote sinful, evil behaviour as it recalls images of the devil, while the broad and symmetrical shape of Space Fighter (Figure 30) could suggest a strong and virtuous personality.[23]

[23] Physical appearance connotes specific characteristics, according to what is familiar and common within a specific society. As a result, body shape often represents specific personality traits. The athletic, powerful and broad body represents a masculine, strong and noble person in contemporary society (Ricciardelli & Clow 2009:106-107).

Figure 28: Brendan Fitzpatrick, X-ray of a toy robot, Android Extraterrestrial, *Invisible Light*.
Print image.
(Fitzpatrick 2014).

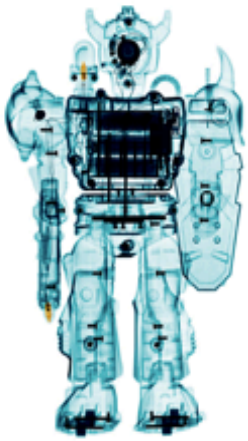

Figure 29: Brendan Fitzpatrick, X-ray of a toy robot, Horned Robot, *Invisible Light*.
Print image.
(Fitzpatrick 2014).

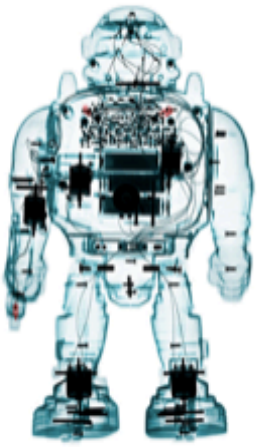

Figure 30: Brendan Fitzpatrick, X-ray of a toy robot, Space Fighter, *Invisible Light*.
Print image.
(Fitzpatrick 2014).

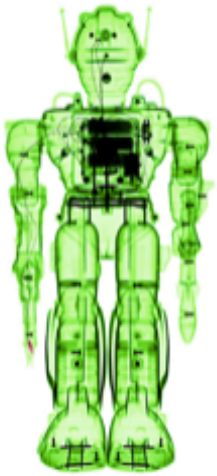

Figure 31: Brendan Fitzpatrick, X-ray of a toy robot, Zadak, *Invisible Light*.
Print image.
(Fitzpatrick 2014).

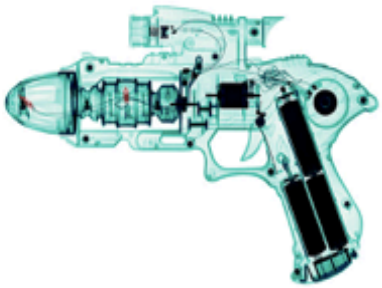

Figure 32: Brendan Fitzpatrick, X-ray of a toy ray gun 01, *Invisible Light*.
Print image.
(Fitzpatrick 2014).

Figure 33: Brendan Fitzpatrick, X-ray of a toy ray gun 06, *Invisible Light*.
Print image.
(Fitzpatrick 2014).

Figure 34: Brendan Fitzpatrick, X-ray of a toy ray gun 03, *Invisible Light*.
Print image.
(Fitzpatrick 2014).

Figure 35: Brendan Fitzpatrick, X-ray of a toy helicopter, *Invisible Light*.
Print image.
(Fitzpatrick 2014).

Figure 36: Brendan Fitzpatrick, X-ray of a toy helicopter, Chinook, *Invisible Light*.
Print image.
(Fitzpatrick 2014).

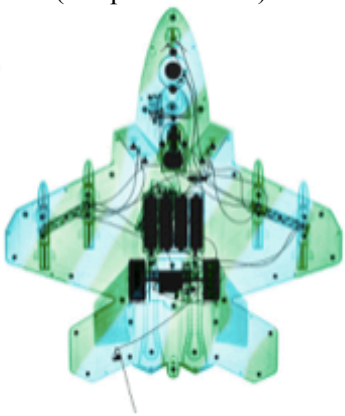

Figure 37: Brendan Fitzpatrick, X-ray of toy, F-22 Raptor Airplane, *Invisible Light*.
Print image.
(Fitzpatrick 2014).

The *Invisible Light* series also manifests the notion that objects have power and actively influence the lifeworld. The reciprocal nature of the power of an X-ray is emphasised by Connor (2008:22) when he notes that "X-rays (…) know the power of radiant seeing and the seeing of radiant power". A radiograph image has the power of X-ray vision, showing man what is beyond the visible. Furthermore, this ability increased the fantasy of power that surrounds scientists, as they believed they could gain more power with such 'magical' inventions (Connor 2008:25). Parallel to the forceful X-rays, the toys in *Invisible Light* also prove to have a sense of power. The power in Fitzpatrick's images are presented by the subject matter of toy guns (Figures 32-34) and war airplanes (Figures 35-37). Ferguson (2003:24) maintains that guns and military weapons represent power to nations and people. Accordingly, to a certain extent, Fitzpatrick also analyses the powerful soul of the controversial object of the gun by X-raying toy simulacra of the weaponry, since toys "signify some property in the real world" (Sutton-Smith 1984:19). Thus, the X-ray toys in the *Invisible Light* series present as a type of 'double powerful threat' combining the force of toys with the power of the X-ray.

Corresponding with the animistic trends, this power represented in *Invisible Light* alludes to fear, fascination and awe. It is a technology "onto which a broad array of hopes and fears is projected and envisioned" (Natale 2011:352). Since its invention, the X-ray has always evoked a sense of amazement in people, because of its mysticism (Natale 2011:352).[24] Moreover, such a revealing image always has fear attached to it. An X-ray connotes a fear of what it might reveal, or the dangers it might confirm. It also holds the fear and danger attached to the process involved to take the actual image. The exposure to radioactivity during an X-ray is lethal and therefore "harbours terrible dangers" that many fear (Connor 2008:4). Toys, in turn, stimulate the response of wonderment that resonates in sacred objects, votary objects and fetish objects (Sutton-Smith 1984:19). Together the toys and X-rays in Fitzpatrick's images create a similar response of amazement, as Uy (2014, emphasis added) describes *Invisible Light* as "stunning, even more attractive than the actual objects themselves, *fascinatingly* detailed, and make for perfect minimalist (and *mesmeri[s]ing*) wall art".

[24] During the time that the X-ray was first introduced (1895), the public were so in awe of this machine that it was used as a visual attraction medium. The public had access to the technology during demonstrations, lectures and at fairs, "being X-rayed could be as easy as going to the movies" (Natale 2011:347). It became an object of obsession or fetishism.

Lastly, the *Invisible Light* series acts as a metaphor in the animistic trend. The use of X-ray alludes to the notion of a 'spiritual X-ray', in which the idea of an all-seeing technology is likened to a boundless, divine entity that sees through everything (Connor 2008:13). In this metaphor the spiritual is suggested to exist within the toys as invisible light, and thus within technology. In addition, toys are metaphors that encapsulate the external world on a miniature level (Sutton-Smith 1984:19). This metaphoric nature of the X-rayed toys by Fitzpatrick, is portrayed in the use of names throughout the series. The robots, airplanes and ray guns are given labels and names that encourage the idea that these entities are ensouled. What is intriguing in the *Invisible Light* series is the presence of batteries within all the toys. These batteries introduce the analogy of energy, force, power and the source of life within the toys (Pancaldi 2009).

Thus the *Invisible Light* series reveals toys with the prominent ideas of animism, arguing that playthings, when X-rayed are ensouled technological beings. When examining these photographs by Fitzpatrick the images are similar to wire toys that are transparent, yet in these images the technological toys are wired with the animistic soul.

Based on this interpretation of Fitzpatrick's visual photographs it becomes evident that toys, whether these are humanoid robots, puppets or figurines, are endowed with animistic properties. The prominence of toys in the animistic relation between technology and soul articulates the playful, quirky tone of this relationship. The animistic soul in technology, similarly portrayed in *Lars and the Real Girl*, is good-natured and endearing, depicting an overall positive and favourable being of technology. The notion of fun and play occur throughout most of these animistic representations of technology and the soul. Perhaps it can be surmised that the animistic perspective suggests that there is a sense of friendship, spirited fun and light-heartedness in the soul of technology, evoking positivity towards the integration of these two concepts.

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In conclusion, throughout almost all of the visual examples analysed in this chapter a technologically-enhanced (not too distant) future is depicted. The technology in these selected utopias/dystopias prove to have an animistic soul, portraying technologically created beings with souls that can be likened to those believed to be in human beings. Therefore these selected visuals portray an animistic outlook on the world. In this animistic belief technology with a soul is portrayed as playful, tender and malleable, which can evoke favourable changes

for humanity. Although this optimistic portrayal of the future sometimes seems possible, it has to be acknowledged that in current times, these relations are already taking place in various manners. Besides the examples mentioned throughout this chapter, other accounts are often heard in contemporary society supporting an animistic view. For instance, recent articles in the *New York Times* (2014) and *TIME Magazine* (2014) provide accounts of an autistic boy who has become best friends with the voice control feature named Siri on his mom's iPhone. According to Newman (2014), Siri helps the boy to better his communication with others. Similarly, author David Milgrim tells the story of a blogger named Dave who (like many) has formed a special relation with Siri in the illustrated book *Siri & Me: A Modern Love Story* (2012). Thus there exists an animistic belief amongst many people, which supports the view depicted in these visual examples.

Ultimately, the visual examples *her*, *Lars and the Real Girl* and *Invisible Light* all depict animism as monistic relation between technology and the soul, manifesting in animistic traditions, by adhering to prominent trends of animistic thought. These trends include the belief in the existence of a soul within nonliving entities; the idea of living in harmony with others; an attribution of subjective characteristics to the material environment; the notion that objects actively influence the human lifeworld; and animism manifests in the form of fetishism and totemism. By identifying these characteristics in the selected films and photographs, it becomes evident that these visual examples affirm that technology contains the soul, which can connect to the transcendental realm and, in doing so, portray a technological soul with a playful, positive and caring nature.

In the next chapter the relationship between technology and soul is investigated from a dualistic, gnostic perspective, by analysing the films *Gravity* (Caurón 2013), *Crash* (Haggis 2005), *Never Let Me Go* (Romanek 2010) as well as selected artworks by Swedish/American artist Aleksandra Mir. Consequently the playful animistic relationship between technology and the soul, uncovered in Chapter 2, is compared to the gnostic worldview's depiction of technology and the soul.

CHAPTER THREE
SAVE OUR SOULS: GNOSTICISM AS DUALISTIC VIEW OF TECHNOLOGY AND THE SOUL

<< soulful : transcendent >>

Armstrong … space suit on, helmet on, plugged into electrical and environmental umbilicals, *is a man who is not only a machine himself in the links of these networks*, but is … in fact a veritable high priest of the forces of society and scientific history concentrated in that mini-cathedral, a general of the church of the forces of technology.
- Norman Mailer on the Apollo 11 launch (1969)

This chapter illuminates the dualistic approach to the soul in relation to technology, or more precisely, the gnostic mind/body split and its manifestation in the Digital Age. In terms of the study's binary oppositions, a firm belief in the soul as well as the transcendent forms the parameters of this section. Rooted in the notion of transcendence, this perspective emphasises the possible spiritual and religious aspects of the soul and technology. These aspects are often evaded in literature, although the spiritual holds a crucial place in current society, as Katz (1995) argues:

> It's the spiritual side of the digital world that is little known and little explored by the legions of puzzled journalists who pore over the computer culture in search of fresh dangers to ward readers and viewers about. Yet, in some ways, it's potentially one of the most significant parts. The ability of one person's spirit to reach across space and connect with another's is, to many, a spiritual act in itself. And the business of sending and receiving messages has always been a core notion of mysticism and spirituality. Countless millions believe, or want to believe, that there are larger forces at work in the universe. And they want to chat with them.

Following a brief description of dualistic thought, I indicate how a gnostic worldview emulates dualism and thereafter classify the characteristics of a gnostic perspective in terms of the soul and technology. Subsequently, Gnosticism is used as a specific paradigm of dualistic belief through which the relationship between technology and the soul is analysed. The use of Gnosticism as an example of a dualistic stance parallels the use of animism as a manifestation of monism in Chapter 2. In turn, the relevance of Gnosticism (an ancient religion) in the Digital Age is explained with reference to posthumanism while referencing pertinent theorists of technology such as Erik Davis, Martin Heidegger and Paul Virilio.

Based on the characteristics of Gnosticism that are identified, contemporary visual culture examples are examined through the gnostic lens. The visual examples include Academy Award-winning films *Gravity* (2013) and *Crash* (2004), both incidently starring Sandra Bullock, selected artworks by contemporary Swedish/American artist Aleksandra Mir, as well as dystopian science fiction drama *Never Let Me Go* (2010). Ultimately, the transcendent soul of the gnostic point of view is deliberated within the realm of technology. Essentially, this chapter interprets visual culture that showcase the journey to save the (gnostic) soul in the Digital Age.

As mentioned in Chapter 1, Gray (2010:638) along with Crane (2000), Deane-Drummond (2009) and Scruton (2014) identify dualism as a specific contemporary perspective on the soul. In the philosophy of mind, stemming from Platonism, dualism is the view that there are two kinds of substances: physical substance in the form of the body, as well as non-physical substance, in the form of the soul, the mind and consciousness. The pinnacle point of dualistic thought is found in modern western philosopher René Descartes' (1596-1650) philosophy of the "thinking person". In his *Meditations* (1641), Descartes proposes that the mind or soul and the corporeal body are two completely distinct substances, but capable of interaction. Furthermore, he constructs the mind or soul as immaterial and spiritual, while the physical body is a simple mechanism. Thus, for Descartes (1984:78), the soul is disembodied:

> [O]n the one hand I have a clear and distinct idea of body, in so far as this is simply an extended, non-thinking thing. And accordingly, it is certain that I am really distinct from my body, and can exist without it.

In addition to substance dualism, dualistic thought also exists in terms of moral dualism. Moral dualism is the belief in the great complement or conflict between the good and the evil, or then the opposition between the virtuous and the malicious. The conviction of binary oppositions stems from Judeo-Christian belief, where the creator (God) represents the good in opposition to everything evil (Satan) (Robinson 2011). Gall (2013:363) explains that Cartesian dualism is rooted in a need for certainty in faith "about the highest real being". It is then in this context that dualistic thought usually occurs within a religious or spiritual quest of existence, such as Christianity and Gnosticism. As a result, for the purpose of this study, the dualistic viewpoint of Gnosticism is, therefore, selected as a specific exemplar to discuss the soul in relation to technology.

Broadly defined, Gnosticism refers to a worldview that denies the material world and endorses the spiritual realm (Hurtado 2005:519). As a philosophical notion, Gnostics are concerned with who human beings are, where they come from and where they are going, in terms of history, as well as spirituality. The perspective stems from the ancient Gnostics, who, during the first and second centuries, followed various scriptures and writings in order to teach, understand and achieve knowledge, enlightenment and salvation united with a divine god (Hoeller 2012). From there the use of the Greek word *gnôsis*, which refers to knowledge and insight (Hoeller 2012) became prevalent. Gnosticism therefore refers to a search for knowledge that is essential to free the self of evil worldly matter, in order to convene with a spiritual sphere (Markschies 2001:2). The ancient Gnostics drew primarily from Christian faith and various interpretations thereof (Rudolph 1977:9). Yet, Gnosticism also derives from an extensive variety of sources including non-Christian documents, Jewish traditions, paganism and Greek thought (in particular that of Plato).[1] Thus Gnosticism is not exclusively related to Christianity. Additionally, the use of different sources is no coincidence, but true to the nature of the gnostic perspective, which argues for polysemy in the search for theological knowledge. Gnostics do not set exclusive rules, rather they attempt to incorporate varying perspectives and interpretations of the spiritual in pursuit of the ultimate insight (Rudolph 1977:53).

For these purposes I have created a diagram (Figure 38) that attempts to explain the gnostic perspective on being. A gnostic view on being sees the world as clearly divided into two halves (Lester 2007:23). The so-called upper world constitutes the first half and encompasses all that is good and eternal, including God, spirit, supernatural beings and the soul. All of the entities in the upper world are seen as an embodiment of divine perfection (Lester 2007:23). The second half, referred to as the lower world, is the material world consisting of matter, flesh and time. This lower world is said to be created by a supreme being, however it opposes the spiritual upper world, as it is considered to be imperfect, evil and temporary (Lester 2007:23). According to the Gnostics, Man (A) is born into the lower world and has to journey

[1] The study of the sources and history of Gnosticism is an extensive subject in its own right, as it includes lengthy debates, examination of authentic witnesses and research on origins. The various sources ranging from early heresiologists, such as *Justin* and *Irenaeus of Lyons*, to the recent (1945) discovery of the *Nag Hammadi Library* is therefore not discussed. Although the study acknowledges that gnostic thinking does rely and is strongly based on these sources (Rudolph 1977:10). For more on the origins of Gnosticism see Rudolph's *Gnosis: The Nature and History of Gnosticism* (1977) and Markschies's *Gnosis: An Introduction* (2001).

to the upper world by gaining knowledge to achieve a being in accord with the spiritual realm (B). This knowledge is gained by examining philosophy, metaphysics, curiosity, culture and unanswered questions about the universe. Therefore, gnosis is a seeking journey of spiritual liberation from the evil, towards a reunion with divinity. Strikingly, Gnostics often inscribe the lower world with feminine attributes such as sensuality, vulnerability, fertility, receptivity and empathy (Rudolph 1977:110; Singer 1995:56), while the upper world is characterised as being masculine. The soul is often gendered as female during its journey on earth while the spirit is gendered as male, encouraging a change from the flawed female body to the divine male spirit.

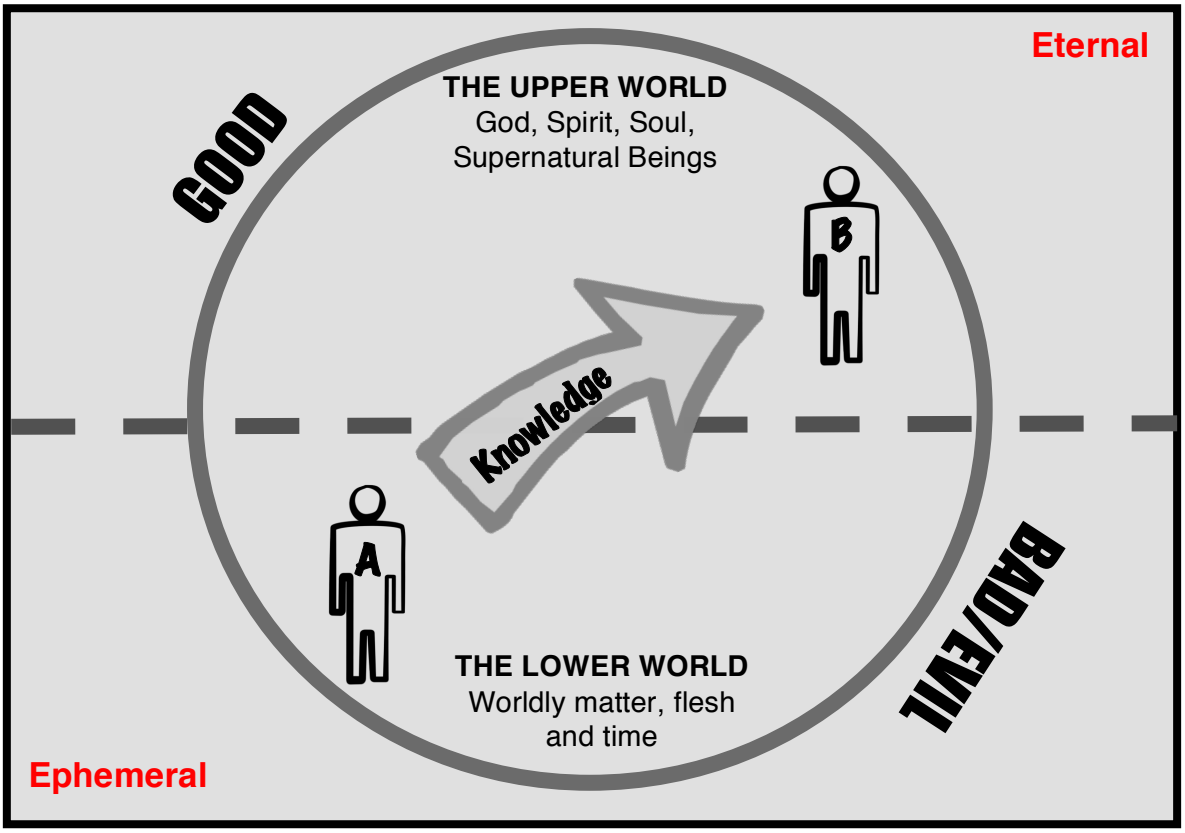

Figure 38: Diagram describing the gnostic perspective on being. Illustration by the author.

The dimensions of the gnostic world highlight the above-mentioned crucial part of Gnosticism, namely its 'dual' dualistic nature. This dualism, firstly, refers to a confrontation between two opposing entities or sides—the good versus the evil—that dominates the entire gnostic view (Krueger 2005:82; Rudolph 1977:65). Secondly, Gnosticism also applies substance dualism or Cartesian dualism as it clearly distinguishes between the soul and the human body as two distinct entities (Krueger 2005:82; Nock 1964:263). The body and earthly matter are seen as the evil prison for the spirit and the soul, which has to be set free in the

higher (upper) sphere (Krueger 2005:82). Therefore gnostic dualism is (fittingly) twofold, occurring as both moral dualism as well as substance dualism.

With this clear distinction between the spiritual essence and the human flesh, the following question comes to light: Where exactly does the soul reside in a gnostic perspective, especially since the soul is fundamentally seen as the point of interaction between the spiritual and the worldly matter? For the Gnostics the soul is part of the divine realm, manifested within the human being who makes his way from the lower world to the upper world (Rudolph 1977:109).[2] For this reason it is listed as an aspect of the upper world in the discussed diagram (Figure 38). Singer (1995:56) describes the gnostic soul as follows:

> The *[gnostic] soul* is our essential nature. Soul inhabits the truth of our own being, the part that seeks to express itself and to live its own life, the part so often repressed or disregarded as we go about our practical lives making our practical decisions for the sake of expediency. The soul is that part of us, which we most often betray, yet she never ceases in her struggle to be heard, to be attended to, to be redeemed. Soul is a very personal aspect of the human being.

Accordingly, it is the soul that goes on the gnostic journey of knowledge, towards its destiny in the spiritual sphere. The soul's ultimate goal is therefore liberation "with the aid of divine messengers and redeemers" (Rudolph 1977:109). However, sometimes the gnostic soul is overwhelmed or distracted by the evil of the lower world and it loses track of its journey, as well as the spirit. During this state of suffering, described as "drunkenness" or "sleep", the "dark and evil powers wish to hold the soul fast in their realm and therefore infatuate it" (Rudolph 1977:111). Only by achieving true gnosis can the soul be saved from this state and evil of the world.[3] It is for this reason that Jonas (1952:435, 450 emphasis added) argues that Gnosticism is "an absolute rift between man and that in which he finds himself lodged: the world" explaining that the gnostic soul "is thrown into an *antagonistic; anti-divine* and therefore *anti-human* nature" from which it has to escape.

[2] This approach to body, soul and spirit correlates with the psychological perspective of CG Jung. Jung has been an influential part of interpreting contemporary Gnosticism as he equates psychological states to the gnostic journey of the self. Jung himself has often been referred to as gnostic and, in turn, Gnosticism is often approached from a Jungian perspective (Segal 1995:3).
[3] These gnostic features of the soul are derived from the ancient gnostic text entitled *"Exegesis on the Soul"* which describes the gnostic myth of the soul (Singer 1995:55).

Finally, gnostic literature informs us that towards the end of the gnostic journey, the soul is reborn or resurrected after remorse is shown (Rudolph 1997:109). The soul is purified and exempted from the evils of the lower world, free to fully embrace the spiritual being. This process can often occur in the face of death or at the apocalypse or purely as a psychological reawakening. After the rebirth the soul is seen "to be at one with the divine Self" as "the soul emerges at last from this darkness and is able to see with new eyes" (Singer 1995:68).

To summarise the gnostic perspective, philosopher Eric Voegelin's six basic inclinations of gnostic thought is referenced. According to Voegelin (1968:297-298), Gnostics: (1) are extremely displeased by their circumstances; (2) credit this dissatisfaction to the wretched state of the world and not themselves; (3) believe that they can be saved from this evil environment; (4) aim to change and perfect the order of being through evolutionary practices; (5) believe that humans are capable of changing the order of being; (6) argue that people can discover the knowledge - gnosis - needed to achieve salvation.

Considering Gnosticism in the contemporary Digital Age, it has to be noted that in recent years both Cartesian dualism and Gnosticism have been challenged and disproved by several postmodern critics. More specifically it is often argued that Gnosticism is outdated, a perspective reserved only for scholars and historians.[4] Nevertheless, both Descartes' predicates and gnostic trails are still present and significant in the twenty-first century, as they have adapted to the Digital Age in the form of conceptions that disregard the human body and material world, such as transhumanism and posthumanism. In both of these so-called "virtual ideals" (Krueger 2005:81), technology becomes the means through which human beings are able to escape their evil earthly bodies and its surrounding physical matter (Kamper & Wulf 1984:12). Various media philosophers agree that virtuality is an assertion of gnostic philosophy (Krueger 2005:81). Postmodern thinkers, such as Davis (1998:122) identify the term *techgnosis* to explain the manner in which technology forms part of the process to "perfect the incorporeal spark of the self".[5] Davis (1998:77) maintains that "the mythic structures and psychology of [g]nosticism seem strangely resonant with the digital

[4] Refer to Segal's *The Allure of Gnosticism* (1995).
[5] As mentioned in Chapter 2, Davis is a technological theorist who believes in the animistic properties of technology, arguing for "technoanimism". However in *Techgnosis* (1998) Davis also argues that there is a gnostic component to technology, in addition to its animistic qualities. Accordingly Davis's assertions can be considered in terms of animism as well as Gnosticism.

Zeitgeist and its paradigm of information". Davis (and others including Žižek, Krueger, Boehme, List, Eerikäinern and Heim) argue that postmodern technology encourages the gnostic journey. It is no wonder then that MIT scientist David Seltzer proclaimed virtual reality to be the "Holy Grail of computer sciences", a metaphor which indicates the mystical and spiritual properties of technology (in Heim 1993:123).

Posthumanism and transhumanism have been briefly mentioned in Chapter 1 and Chapter 2, however what follows is a more concise categorisation of these ideas in relation to the gnostic perspective. Posthumanism refers to the notion of overcoming human nature through the means of technology - it is the final culmination of interceding and supplementing technology. According to Wolfe (2009), posthumanism is what confronts us when we can no longer be classified as simple autonomous humans, but humans enhanced by technology. Thus for Wolfe (2009) posthumanism is what comes "after humanism". In *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature and Informatics*, Katherine Hayles (1999:2-3) explains that the posthuman condition entails the following aspects: (1) for posthumanism the physical need for a biological body is no longer a necessity as information is privileged over matter; (2) in a posthuman environment consciousness is considered a secondary symptom, no longer the totality of human identity; (3) posthumanism regards the biological body as an extension that can be altered and replaced; (4) for posthumanists the human being and intelligent technology are interconnected to such an extent that there no longer exists a difference between the human body, biology and technology. In turn, Wolfe (2010:xiii) refers to transhumanism as "a strand of posthumanism" that focuses on the perfecting and enhancing of human capabilities through technology to overcome any form of distress. Therefore, the terms transhumanism and posthumanism are often used interchangeably.

In terms of the gnostic perspective, as well as the transcending/soulful parameters of this chapter, posthumanism can be described as a venture aimed at achieving transcendence from the immanent biological body and evil world through technology. Hughes, Bostrom and Agar (2007:4) explain that posthumanism is the pursuit of transcendence through technology instead of through the means of spiritual practices. Similarly, Hook (2004) argues that "transhumanism is in some ways a new incarnation of Gnosticism. It sees the body as simply the first prosthesis we all learn to manipulate". To highlight the parallel between posthumanism and Gnosticism, Zimmerman (2009) identifies a correlation between the

principles of Gnosticism as identified by Voegelin (mentioned above) and the traits of posthumanism:

> 1) [T]here is much to be dissatisfied with about the world (including being trapped in a pathetic, weak, and mortal human body); 2) this world is replete with suffering, ignorance, and death that should be eliminated; 3) salvation from such evil is possible; 4) the order of being must be changed and perfected through developmental/evolutionary human process; 5) humans are capable of effecting such change, first through transhumanism, but definitely through posthumanism; and 6) humans are now discovering the *gnosis* needed to bring about such change.

Accordingly, posthumanism and transhumanism can be seen as a postmodern version of Gnosticism in the Digital Age. It is important to note that Gnosticism is regarded as a pessimistic point of view. Whether the posthuman transcendence is viewed as an exciting, unavoidable, utopian ideal or a horrifying loss of human control, from a gnostic perspective a clear negative stance towards the world and the immanent is always present. Klock (2004) explains that for Gnostics the universe is a prison, and everything in it tries to destroy the human being and the soul. Although transcendence is always attainable it comes at the price of abandoning the known human body. The "[g]nostic [p]ost[h]umanism suggests it may be our destiny to evolve beyond the merely human, but this may be a move toward a dark future where we are simply destroyed or made more advanced in the realm of torture, cruelty, and humiliation" (Klock 2004). Therefore, the gnostic outcome of salvation should not be mistaken for an optimistic reading of the relation between technology and the soul - as in the case of the animistic perspective - since it is based on a distinctly negative view of worldly matter.

Following the gnostic perspective on technology and the soul, specific theories formulated by Heidegger, Virilio, and Baudrillard can be applied and used to analyse and add to this point of view. Although these thinkers do not proclaim themselves as Gnostics, their thinking often shows a equivalence to a gnostic trail of thought or a comment on the gnostic posthuman, therefore they can be used to support various interpretations of the postmodern gnostic point of view, especially in terms of transcendence and soulfulness. Heidegger (1962:38), for example, recognises the transcendental nature of *Dasein* and argues that "*[b]eing is the transcendence pure and simple*". Furthermore, his concept of Being shows similarities to the

gnostic notion of the self and the soul (Taubes 1954:160; Jonas 1952:449).[6] In turn, Paul Virilio (2002:12) argues that the joining of technology and violence gives rise to a new gnostic "mortification of the flesh". In order to explain accelerating military technological development Virilio (1977) also refers to the relocating gnostic soul. He explains that the weak soul is seen to be imprisoned in the body, while the powerful soul is flowing and adaptable, moving from one embodiment to the next. Thus, to Virilio the speed of military Gnosticism is "not only the acceleration of the vehicle but the 'pure' acceleration of the soul moving from embodiment to embodiment, and so able to exceed any territorial capture" (Noys 2014). Virilio (1977) does not approve of this fluidity of the soul, instead he critiques this development, arguing that it creates a world filled with detached souls and degeneration. In turn, Jean Baudrillard (2001) evokes Gnosticism in several of his writings, especially since he often focuses on the duality of the good versus the evil (mainly in his work on terrorism). Baudrillard (2001:90) declares:

> The most difficult thing is to think Evil, to hypothesi[s]e Evil. This has been done only by heretics: Manicheans and Cathars, both groups envisioning an antagonistic coexistence of two equal and eternal principles, Good and Evil, at once inseparable and irreconcilable. Within this vision, duality is primary. It is the original form - as difficult to conceive as the hypothesis of Evil.

As a result, Heidegger, Baudrillard and Virilio are referred to and discussed throughout this chapter and during the analysis of the selected visual examples from a gnostic perspective. This description of Gnosticism emphasises specific traits and characteristics that are essential to this worldview. What follows is a brief description of each of these attributes, which include:

I) The notion of the good versus the evil

As mentioned, a gnostic perspective divides the world into that which is evil and that which is good (Griffith 2011). For Gnostics, the evil represents the material world and its associations, while the good embodies the divine realm. Therefore evil is always seen as a "problem" that needs to be overcome by the good (Echavarría 2013:735). Paradoxically, the good needs the presence of evil to be identifiable, just as the bad needs to oppose good to actually be dubbed 'evil' (Echavarría 2013:735). Thus good cannot exist without evil and

[6] See *The Gnostic Foundations of Heidegger's Nihilism* (1954) wherein Taubes outlines the parallels between Heidegger and gnostic traits, as well as *Gnosticism and Modern Nihilism* (1952) in which Jonas highlights the gnostic traces in Heidegger's as well as Nietzsche's work.

vice versa. These are fixed in a constant state of tension between dependence and resistance. A reconciliation between these two extremes is not always clear and their interaction is often simply accepted as a mystery (Echavarría 2013:735). The prominence of the good versus the evil is an important aspect of the soul's journey, as the soul negates and tries to overcome the evil to achieve enlightenment.

II) An awareness of being an outsider or a sense of alienation in the world

The second fundamental aspect of the gnostic perspective manifests as a result of the presence of evil throughout. Zimmerman (2009:79) suggests that because Gnostics perceive worldly matter as evil, they are repeatedly dissatisfied with the world. The evil creates a constant presence of dissatisfaction, entrapment, weakness, mortality, suffering and, most importantly, a sense of estrangement and alienation in the world (Hoeller 2012). Thus Gnostics argue that human beings "suffer from the frequent recognition that they are strangers living in a world that is flawed and absurd" (Hoeller 2012). This sense of alienation is described as a loneliness of the soul, separated from the divine, which is a necessary part of the journey back to the divine (Rossbach 1999:55;148). Davis (1998:287) perfectly describes this sense of alienation as a "homesickness" driven by a primal sense of estrangement.

III) A desire for intimate knowledge

Gnosis is centred on a quest and desire to obtain intimate knowledge. This knowledge does not refer to 'book smarts' but instead it suggests an understanding of the self, the divine spirit and the divine soul (Rudolph 1977:113). Gnostics argue that knowledge is the "uncovering of the roots which leads to the withering of the tree" (Rudolph 1977:114). In opposition to this knowledge stands the ignorance or darkness of man, which attempts to prevent beings from obtaining understanding (Rudolph 1977:113-114). This conflict between knowledge and ignorance is a universal occurrence, which emphasises the overall triumph of the so-called moment of gnosis (Rudolph 1977:114). Thus, once a being achieves salvation or atonement with the divine through this knowledge, their achievement acts as a kind of juxtaposition against the ignorance of the rest of the world. The juxtaposition then highlights the necessity and affirmation of the soul's journey, inspiring others to seek the knowledge to do the same. Notably, both physicalism and Gnosticism however, emphasise the influence of technology in the obtaining of knowledge. As discussed, technology forms part of the process of gnosis, as an aid in the seeking of knowledge and enlightenment, a manner to overcome the vile

earthly matter. Technology's role in the pursuit of posthumanism is likened to the spiritual gnostic quest, obtained through knowledge (Kurzweil 1999:375; Zimmerman 2009:69).

IV) Escapism

Another characteristic of the gnostic perspective refers to the notion of escapism to overcome alienation. In the journey of the soul one of the ultimate goals is to escape and break free from evil worldly matters (Singer 1995:68). This goal is often pursued by attempts to "to escape the earth, to reach eternal life, and to overcome the limitations of current existence" (Coeckelbergh 2010:961). Emphasising the role of technology within a posthuman gnostic worldview, Hefner (in Coeckelbergh 2010:961) argues that most of technology today is created in an attempt to escape finitude. In this manner "technology becomes almost explicitly religious" (Hefner in Coeckelbergh 2010:961). It is suggested that technology becomes the means to escape, which Gnostics seek. Sometimes this need to escape the world manifests literally as "we try to be extraterrestrial" (Coeckelbergh 2010:965), for example through transhumanism. However, the escape is metaphorical: Aupers and Houtman (2005:81-82) suggest the term "cybergnosis" to explain the notion of people who escape to the cyberworld to escape their circumstances, since they can thrive spiritually in a digital world. The gnostic journey of the soul that turns the self towards the inner self, is also seen as a form of escaping (Coeckelberg 2010:965).

Accordingly, the main characteristics of Gnosticism are seen as the fundamental steps in the journey of the gnostic soul. Firstly, as the gnostic soul finds itself in a world separated by good and evil, it becomes increasingly aware of being an outsider and a sense of alienation in this world, and the soul then develops a strong desire to escape (literally and figuratively) from the world and gain intimate spiritual knowledge. During this journey, specific signs of Gnosticism can also be identified that aid the gnostic soul on its journey. The signs include the presence of supernatural beings, an ethical like-mindedness and a collision and balance of polarities.[7]

[7] The presence of supernatural beings refers to the existence of beings that have non-human properties such as the ability to change circumstances (Shultman 2008:1123). In Gnosticism, these beings are usually believed to obtain their non-human properties from the divine realm or God (who himself is considered to be a supernatural being) (Zimmerman 2009:71). Accordingly, supernatural beings include angels, the devil, ghosts, goddesses and similar entities (Shtullman 2008:1123-1124). Within the gnostic realm much emphasis is placed on the existence of angels as descending or fallen souls that return to earth (Logan 2006:42) to act as messengers and mediators between human beings and

These characteristics and signs of the gnostic soul's journey can often be identified in visual examples. Art and other forms of visual culture have depicted a gnostic worldview for several years, depicting (and sometimes evoking) a sense of transcendence in viewers. Perhaps one of the most integral of these in the twenty-first century is the popular *Matrix Trilogy* (Wachowski Brothers 1999-2003). One of the central themes of *The Matrix* poses the question "to what do we awaken?" thereby contemplating how to achieve enlightenment (Flannery-Dailey & Wagner 2001). Flannery-Dailey and Wagner (2001) explain that *The Matrix* depicts "that there may be levels of metaphysical reality beyond what we can ordinarily perceive, and the film urges us to open ourselves to the possibility of awakening to them". In light of a gnostic interpretation of this film, this chapter applies a gnostic worldview to other contemporary visual examples in contemplation of the relationship between technology and the soul. In turn, the pursuit of visual knowledge can be likened to and aid in the gnostic process or search of enlightenment (Gunning 1997:1). In particular Gunning (1997:1) proposes that the world of cinema's visual language has a gnostic undertaking, as its devices (notably technological) have the ability to uncover knowledge about the self, and thus the soul. Thus, often a state of gnosis may be achieved through interaction with the realm of visual culture.

In view of the above-mentioned characteristics of Gnosticism and posthumanism, what follows is a hermeneutical interpretation of the films *Gravity* (Caurón 2013), *Crash* (Haggis 2004) and *Never Let Me Go* (Romanek 2010) and selected artworks by artist Aleksandra Mir. Both *Gravity* and Aleksandra Mir's work depict the technological advancement of space travel, which incorporates the posthuman astronaut and the gnostic notion of alienation and escapism, while *Never Let Me Go* also comments on the posthuman phenomenon in terms of cloning. *Crash* exemplifies Virilio and Baudrillard's theories of detachment, technological accidents as well as the premise of good versus the evil, which relates to the same prominent gnostic traits. Moreover, these visual examples portray aspects of Gnosticism and comment

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the divine (Davis 1998:313). For further studies of angels, especially in a postmodern context, see Paul Lévy's *Collective Intelligence: Mankind's Emerging World in Cyberspace* (1999), Luce Irigaray's *An Ethics of Sexual Difference* (1993) and Michel Serres's *Angels: A Modern Myth* (1993). Additionally, an ethical like-mindedness refers to an inner integrity and intuition, stemming from the "divine spark" within a human being and encompasses "a respect for the freedom and dignity of other beings", an unattached attitude to the world, as well as a lack of self-centredness (Hoeller 2012). Finally, a collision of polarities occur in Gnosticism owing to its dualistic nature in which two poles are always seen as colliding (Krueger 2005:82).

on the soul in relation to technology and are therefore considered throughout the remainder of this chapter. By applying a gnostic and dualistic perspective to these visual works I hope to reveal and discuss the transcendental and soulful nature of the relationship between technology and the soul.

3.1 A leap of faith

In 1969 Neil Armstrong became the first man to place his feet on the surface of the moon with the famous words: "That's one small step for man, one giant leap for mankind". As Armstrong stepped onto the moon, mankind leaped into a whole new aeon. This small act that took place millions of miles from earth ironically brought significant change to the world below. As Virilio (1997:139) explains "Neil Armstrong (…) only became aware of what he had done 'up there' once he had come back down to earth". By providing a view of the world, space exploration transforms the worldview of humankind (White 1998). Since 1969, placing man in orbit has become an extension of being that at the present moment seems ordinary, since even tourists (with a spare three million rand floating around) can now apply to travel through space. In turn space missions that have gone wrong, such as the explosion of the Challenger shuttle in 1986, emphasise several important questions concerning this technology to which people have become accustomed (White 2013:30). Thus the lift off into space, and its accompanying disasters have launched "a period of intense soul-searching" (White 2013:30) for those left behind on earth.

As space travel provides awe-inspiring visuals of the physical world, it is no surprise that the realm of the visual has noted the soul searching journey that is so often emphasised by space exploration. From the *Stars Wars* franchise and *2001: A Space Odyssey* to Andy Warhol's *Moonwalk* (1987), several visual examples have depicted this voyage in different forms. Perhaps one of the most recent films to reach for the stars is Alfonso Cuarón's *Gravity* (2013). The award-winning film presents the story of a medical engineer (Ryan Stone) and a veteran astronaut (Matt Kowalski) on a routine mission, who become detached from their shuttle, loose contact with earth and must find a way back home - before their oxygen runs out.

Considering its title, subject matter and the fact that the film depicts the so-called "miracle" of science and technology, it is somewhat tempting to simply perceive this film as a physicalist analysis of how technology has made the impossible life in space possible.

Especially since the film begins with the statement "At 372 miles above the earth there is nothing to carry sound, no air pressure, no oxygen [l]ife in space is impossible" (Cuarón 2013), and then the film goes on to prove that science and technology can overcome these barriers just as it can defy gravity. However, looking beyond the technology and science in the film, Cuarón depicts a tale "haunted by an array of religiously evocative questions" (Renshaw 2014:1). Throughout the film, the audience is constantly made aware that they are not only in space, but also in a gnostic, spiritual space, as *Gravity* questions what happens to the soul when it discovers that it is profoundly alone (Renshaw 2014:1). Accordingly, Ryan Stone and Matt Kowalski's journey through outer space becomes a religious journey within the gnostic realm.

Related to the title of the film, Virilio (1997:31) also demonstrates the force of gravity that influences the human being's interaction with the world. He explains that once man defies gravity—as astronauts do—man's relation to the world changes. *Gravity* then implies more than a scientific phenomenon, since identity transfigures in relation to the strength of the downward pull of the earth. The soul undergoes change when it escapes gravity. This change, according to Virilio, is negative as it leaves the soul without a sense of self. The vast development of technological space travel "attacks the liveliness of the *subject* and the *object* by atrophying the *journey* to the point where it becomes needless. A major handicap, resulting both from *the loss of the locomotive body of the passenger*, the televiewer, and from the loss of that solid ground, of that vast floor, identity's adventure playground of being in the world" (Virilio 1997:34).

Throughout the film the themes of transcendence, spirituality and soulfulness are evident, especially in the form of certain signs, symbols and motifs. Close-up images of mementos that various astronauts leave behind in the space stations include a Buddha statue (Figure 39) and a Saint Christopher icon (Figure 40) that relate to both Buddhist and Catholic traditions, respectively. Notably, Saint Christopher is considered the Catholic patron saint of travel, protecting travellers on their journeys (Pageau 2013). The icon therefore acts as a symbol of divine protection to Ryan Stone on her journey through space. In addition, reference is made to the afterlife in the film as Ryan tells Matt (who is already dead): "You are gonna see a little girl with brown hair, very messy, lots of knots (…) you tell her that she is my angel". She believes that Matt will meet her daughter (who passed away) in the afterlife. Furthermore the notion of prayer and the soul is also mentioned as Ryan wonders who will pray for her

soul if she dies. Hence *Gravity* discusses the transcendental and the soul, emphasising the supernatural parameters of the gnostic realm. Accordingly gnostic characteristics can be identified throughout the film.

Figure 39: Buddha statue featured in the spacecraft, *Gravity*. 2013.
Screen shot by the author.

Figure 40: Image of Saint Christopher in the spacecraft, *Gravity*. 2013.
Screen shot by the author.

Gravity's account of Dr. Stone's excursion through outer space can be likened to the gnostic journey of the soul towards salvation. Ultimately the film portrays a tale of rebirth since it presents a being alienated and alone in a world from which she wishes to escape. As Ryan makes her way back to earth and at the end of the film arrives safely home, she gains intimate knowledge about the meaning of life. Her soul is then "reborn" and finds peace as she develops a new lust for life. Renshaw (2014:1) confirms this gnostic journey:

> If life is suffering and in the end we are all alone what is the point? For Mission Specialist Ryan Stone (Sandra Bullock) this is the question that drives her journey, a journey that takes her from the stultifying emotional death that has been the effect of having lost her child to the brink of her immanent physical death and ultimately to a renewed engagement with life.

Considering that this space mission echoes the gnostic journey of the soul, it becomes clear that Cuarón's choice to have a woman in the driver's seat is no coincidence. As mentioned, the gnostic soul is usually portrayed as a woman and therefore the female protagonist perfectly embodies the gnostic journey of rebirth. Similar to the female soul, the female astronaut, Ryan Stone, also symbolises fertility and the possibility of new life, and represents a renewed sense of hope that accompanies the spiritual realm of the gnostic sphere.[8]

[8] The juxtaposition of a so-called typically male engendered name given to a female protagonist can also be seen to emphasise the importance of the female role throughout the film.

The journey of *Gravity* takes place within a universe where the forces of good and evil, akin to the force of gravity, pull the characters in various directions. The astronaut's main desire is to escape from the evil matter on planet earth. The journey into space is the literal act of fleeing from the evil of earth to "simply break the natal bond of gravity between body and earth" (Romanyshyn 1989:29). Although the film does not reveal why Ryan chose to become an astronaut, it is evident that she wishes to break free from the sadness of the death of her daughter that she experienced on earth as she recounts: "I had a daughter. She was four. She was at school playing tag. Slipped, hit her head, and that was it. Stupidest thing. I was driving when I got the call, so… ever since then, that's what I do. I wake up, I go to work, and I just drive" (Cuarón 2013).

If earth is then seen to be evil and a bonding force, this should then automatically imply that outer space is a 'good' place, or the place of salvation, since this is where astronauts escape to. However, *Gravity* proves (in accordance with Gnosticism) that outer space too is considered evil. The bad and unjustness of earth cannot be avoided through a simple change of perspective. Once Ryan realises that she needs to go back to earth to survive, outer space becomes the 'bad' realm. This is highlighted by the uncontrollable space debris that destroys the space station and detaches the two characters from one another (Cuarón 2013). Even in space there are dark uncontrollable forces that represent evil. As Ryan takes a last look at the destroyed station she proclaims: "I hate space", affirming that the divine is not simply located in the literal realm above earth. This is in agreement with Romanyshyn (1989:29) who argues that not even the technologically formed astronautic body can quit earth. Moreover, the voyage of the human body into outer space is only considered successful if it does return to earth (Romanyshyn 1989:205).

As soon as Ryan confesses that she hates space, the audience realises that there is no escape: "for the human race there is *no space* anymore, at least no durable occupation of outer space. That is, there is no way to escape from Earth" (Latour 2013:[sp]). The only good now exists in the transcendent journey of the soul back to its divine home as prescribed by Gnosticism. The notion of a spiritual home (and its gravitational force) becomes the sole motivational source of good that helps Ryan Stone survive (Klawans 2013:34).[9] It is important to note that,

[9] Interestingly, Ryan's surname, 'Stone', also alludes to the notion of gravity. A stone is closely related to the concept of nature and earth, while the throwing of a stone indicates the force of gravity.

in accordance with Gnosticism, this notion of home does not necessarily represent a specific physical place, but rather a freedom and spiritual space of acceptance, relief and accord. This is emphasised by the apparition of Matt that leaves Ryan with the final words: "It's time to go home" (Cuarón 2013). Ryan has found inner peace and as a result her soul can now return to earth. *Gravity* accordingly manifests the gnostic journey of the soul in search of transcendence, from the realm of evil to good.

Within this tension between good and evil the film depicts three prominent traits of Gnosticism, including alienation, escapism and rebirth. Renshaw (2014:3) contends that *Gravity's* central premise is that of radical so(u)litude which "orients one towards death not life". After the space debris crashes into their space station, Kowalski and Stone find themselves alone in an unfathomably large void. They are left alienated from the world as they lose all contact with Houston. They are literally *alien*ated owing to the fact that they become extraterrestrial beings trying to, as ET would say, "phone home". In a metaphorical sense Ryan Stone is also alienated from her life after the death of her daughter. Even on earth she is alone, there is nobody "down there, looking up thinking about her [*sic*]" (Cuarón 2013). Her solitude on earth resonates with the gnostic notion that human beings are aliens on earth (Romanyshyn 1989:19). The plot of *Gravity* becomes "the ultimate case of existential dread, and a harsh lesson in the economics of being alone in the universe" (Klawans 2013:33), which is perhaps one of man's largest fears. The gnostic notion of solitude is then further emphasised when Stone has to physically let go of Kowalski, in order to save herself and make her way to safety. If she lets go of his hand she will survive, but if she hangs on they will both die (Renshaw 2014:3). Kowalski finally lets go and drifts from her like a balloon drifting into the unknown void. She is now entirely alone.

The visual and sound effects of the film emphasise this alienation. Throughout the film Stone's breathing is constantly audible as the audience is reminded of her vulnerable status, her loneliness and her (breathing) soul. In addition, several scenes place the astronaut's body in opposition to the infinite parameter of space (Figure 41), which reminds the audience of "how small each individual life is against the whole" (Renshaw 2013:3). A particularly significant image in the film occurs after Ryan safely enters the International Space Station

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Therefore the force of gravity and the pull towards the transcending notion of home is even embedded in Ryan's most essential being.

(ISS) and looks out of the window calling out to Houston, confirming that she is alone and the sole survivor of their mission. In this scene (Figure 42), Ryan's face reflects in the window over earth. This image shows the alienated astronaut looking at earth and back at herself, as the view from space becomes part of her mirror image. It reveals that there is nobody but herself left in that world. The audience (and Dr. Stone) is left wondering whether she will remain drifting or find her way back to earth. In this sense she is actually looking through the window of her gnostic soul, questioning her role as a being. In this regard, Mirzoeff (2015:2) mentions that looking at earth from this particular perspective is for some a source of great spiritual and environmental insight, because it seems as if they are "viewing the planet as if from the place of a god". Similarly Ryan gains spiritual insight (or gnostic knowledge) from her voyage through space, during which the earth is constantly on her horizon, as reflected in her looking onto earth. Consequently, space travel acts as a metaphor for the gnostic journey of the soul towards transcendence.

Figure 41: The astronaut body placed above the vastness of the universe, *Gravity*. 2013. Screen shots by the author.

Figure 42: Dr. Ryan Stone (Sandra Bullock) looking out of the window of the ISS onto earth and her solitary reflection, *Gravity*. 2013. Screen shot by the author.

Space travel implies the gnostic notion of escaping from earthly matter. The astronaut's journey from earth into space can represent the desire to physically flee from the material world (and gravitas) (Romanyshyn 1989:29). Lieutenant Matt Kowalski's trip to space reflects this escape from earth. For him there is no better place to be than in space. He describes his job as "kind of like winning the lottery" with an unbeatable view (Cuarón 2013). He also finds no difficulty in letting go in order to save Ryan. He is content to die in space and still makes jokes and admires the view while he drifts towards his death with the final words "Oh, my God (…) Wow (…) It's amazing" (Cuarón 2013). Kawolski's idea of home and the transcendent is not related to earth, instead his soul finds peace and is at home within.

The gnostic theme of rebirth is also prominent throughout *Gravity* (Renshaw 2014:5). The spectacle of the astronautic body attached to a space suit is the junction between man and machine. The body in space thus resembles the imagined rebirth of humanity as one with technology, a rebirth located in space (Romanyshyn 1989:19). In this manner the space suit and ship can be likened to "an external womb" which houses the "foetus" of the astronaut (Romanyshyn 1989:18). Furthering this metaphor, the image of the astronaut attached to the space ship by a braided steel tether can represent the umbilical cord that ties the astronaut to technology, acting as a reminder of gravity (a force that always pulls the astronaut back). Perhaps this image is best recognised in the opening scenes of the film, where the third accompanying astronaut on Kowalski and Stone's mission, Mission Specialist Shariff, enjoys a spacewalk (Figure 43). The image of Shariff's astronautic body floating in space clearly signifies the rebirthing possibilities between technology and soul.

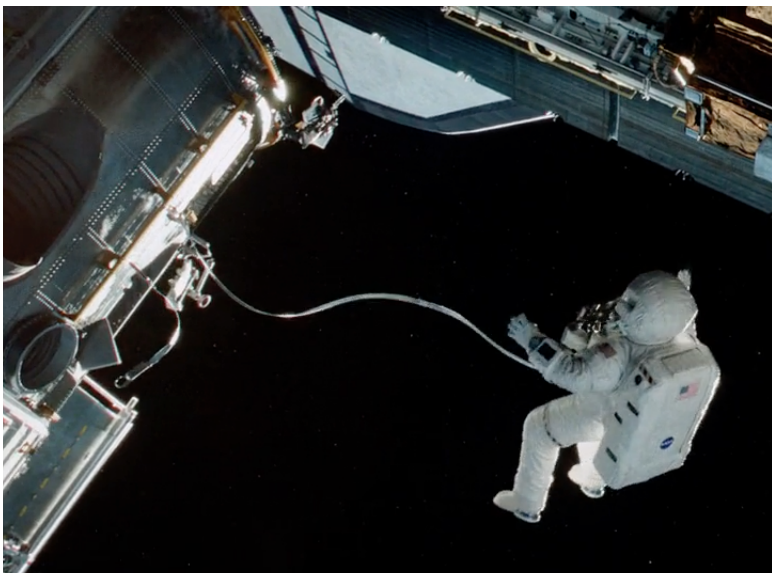

Figure 43: Mission Specialist Shariff during a spacewalk, *Gravity*. 2013. Screen shot by the author.

Several other images related to Ryan, stripped of her suit, reflect the notion of rebirth, to become undone. For instance, once Ryan reaches her first tentative point of safety she takes off her space suit and gently tumbles through the ISS, surrounded by cables (Figure 44). The image once again reminds of the foetus within the womb of the space station, attached to the umbilical cords, kindling the possibility that rebirth (or then new life) can exist within a purely technological environment. Furthermore, when Stone accepts that she is going to die the accidental radio signal she has tuned into resounds the cry of a baby and a man singing her to sleep, reminding her of her daughter's infancy and the "tropes of maternity, birth and rebirth" (Renshaw 2014:5).

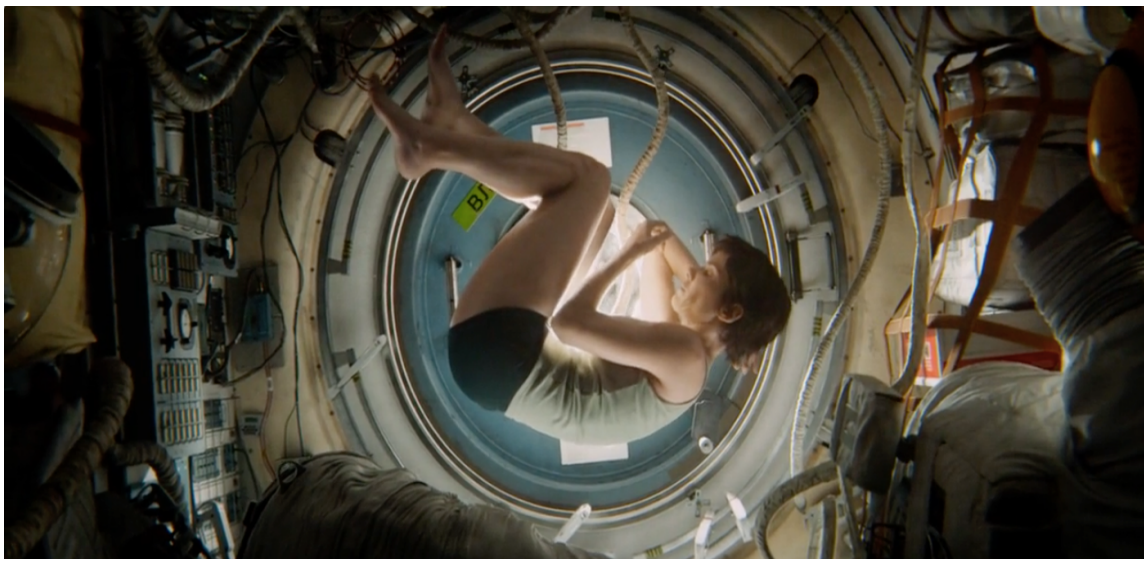

Figure 44: Ryan Stone floating within the ISS space station, *Gravity*. 2013. Screen shot by the author.

Given this gnostic journey of the soul, perhaps the most important point of discussion is the role of technology within this journey. Romanyshyn (1989:18) describes the entire concept of space flight as "the dream of technology". Everything from the suits to the stations unites man and machine in space, evoking the gnostic ideal of the posthuman. In *Gravity* technology becomes an aid which makes escape (from earth and back to earth) possible. It provides the place and means for salvation and rebirth. It becomes the means for the soul's gnostic journey. Therefore, in gnostic terms, it can be seen as the mediator, messenger and intercessor between the human soul, the evil earthly body and the divine. It is only when the soul has completed its journey and is ready to move forward that there is no further need for the technological intervention. This is illustrated during the final scene of the film where Ryan walks into nature, completely rid of technology (Figure 45). Consequently, from a gnostic point of view, technology can be said to act as an aid to reach the divine. It becomes

part of the so-called ‘master plan’ towards the journey of the transcendent soul. The means of technology emphasises Heidegger’s (1977:5) argument that “technology is a way of revealing”; in the gnostic worldview, technology reveals the transcendent.

Other motifs throughout the film also evoke prominent characteristics of Gnosticism. Firstly, several collisions of different matter symbolise the gnostic collision of dualities and polarities. It is the collision of the space station with the space debris that acts as the inciting moment of *Gravity*, which sparks the events of the rest of the film. The astronauts also collide into one another and the respective space stations in their attempt to find safety. In addition, the collision of the escape pod into earth brings forth the final steps of transcendence. Secondly, *Gravity* also makes reference to supernatural beings, specifically angels. To a certain extent, Matt Kalowski becomes an angel that helps Ryan in her journey. In a particular scene, Ryan is about to give up on life, when an apparition of the assumedly dead Kowalski appears and motivates her to move on. He explains to her that life is not about what happens to a person, but how a person reacts and remains intent to keep going. He then proceeds to help her find a way to get home. Furthermore, he brings a relief to her persistent loneliness. Renshaw (2014:4) describes the vision of Kowalski as a “God-like apparition”, placing him within the divine realm. The country song *Angels are hard to find* by Hank Williams Jnr that he listens to during the mission accentuates Kowalski’s angelical status. Ultimately, during the final scene, as Ryan drags herself onto land she whispers “thank you” to a seemingly higher presence, expressing her gratitude to the divine beings (Figure 45).

Figure 45: Ryan Stone arriving back on earth, *Gravity*. 2013.Screen shots by the author.

3.2 The writing is on the wall

The gnostic soul's journey metaphorically represented through space travel, is not only visible in Alfonso Cuarón's *Gravity*, but is also present in several works by Swedish/American artist Aleksandra Mir. As a well-known and celebrated artist "Mir drills holes in the world around us and exposes conventions, hidden rules, and social politics behind everything from Stonehenge to the Concorde to Neil Armstrong's walk across the moon" (Bollen 2003). During 2009, Mir's work particularly focused on space travel, technology and religion. Selected images from her 2009 exhibitions *The dream and the promise*; *The space age collages*; *Aim at the stars*; *Astronauts*; *The promise of space*; as well as *The passion* are analysed to consider Mir's view on the gnostic soul and technology.

In these exhibitions Mir combines images of faith with images of technology and science through the means of paper collage. For example, in *The dream and the promise* (2009) (Figure 46) she presents a series of collages that combine images from the Kennedy Space Centre in Florida and Baroque churches of Sicily. Mir argues that there are several propositions that estimate that technology and faith are opposing entities, yet there is considerable evidence that the two notions converge and relate to one another. For instance, she mentions that Galileo Galilei, the father of modern science, was also a devoted Catholic (Mir 2013). As a result, she merges these images to indicate the similarities between the journey through space and the realm of the transcendent.[10] The concept of space travel has also been a repeated motif in Mir's work. As an artist she "considers global events in popular culture such as the moon landing, the development of mass aviation culture and the progress of various space programmes to have a great influence on how we live and perceive ourselves in the world" (Mir 2013). Thus Mir, echoing Davis, depicts how the technological culture of space travel contributes to the manner in which the soul is perceived and understood.

[10] Although reviews of her work argue that Mir juxtaposes these images (Crichton-Miller 2013; Ezzo 2011), it is preferred to refer to the collages as a merging or combination, as the artist does not aim to highlight the differences between the images, but rather the similarities and relations (Mir 2013).

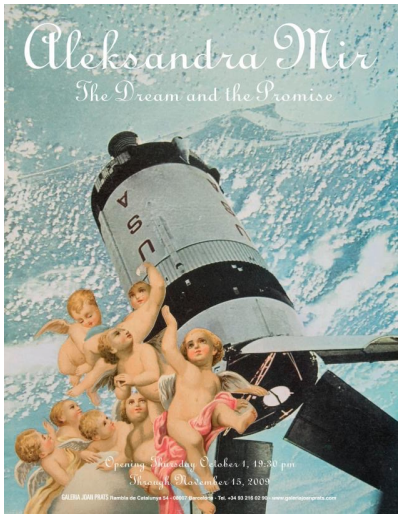

Figure 46: Aleksandra Mir, *The dream and the promise*, 2009. Invitation Poster. (Mir 2015).

This amalgamation of space travel and the transcendent, which occurs throughout Aleksandra Mir's work, emphasises important aspects of the gnostic journey of the soul. Perhaps the most prominent gnostic feature in the collages is the collision of two seemingly opposing realms. Following the gnostic train of thought, Mir's work balances and brings together two different components of life. For example, in *The promise of space* one of the 33 images places a typical religious image of Sunday school teaching, or then relatedly the image of Jesus teaching the disciples, on Mars (Figure 47), while another shows a folkloric religious icon playing piano on the moon (Figure 48). In both these images the world of space and symbols of transcendence collide: "here are halos mixing with astronauts' helmets, cherubs frolicking with rockets on the launching ramp, the dresses of angles merging with the suits of cosmic voyagers" (Mammi 2010). As both these images reveal, Mir imagines that it is possible for these realms to not only co-exist, but also to unite.

Figure 47: Aleksandra Mir, *The promise of space*, 2009. Paper collage on board. (Mir 2015).

Figure 48: Aleksandra Mir, *The promise of space*, 2009. Paper collage on board. (Mir 2015).

Mir's artwork also incorporates angels and celestial beings. In *The passion* (2009) and *Astronauts,* for example, Mir relates the ideas of angels and astronauts arguing: "if angels and astronauts share the same sky, isn't it time they were introduced?" In doing so Mir shows how certain aspects of space travel and gnosis have correlating parallels. For example, Mir suggests that the circular halo of angels resembles the astronautic suit's head as yesterday's halo becomes today's helmet (Herbert 2013) (Figure 49, 50). Astronauts and angels, in *The passion* and *Astronauts,* therefore manifest similar qualities. This manifestation correlates with Serres (1993:7) who argues that technology shows angelic characteristics. For Serres (1993:8) "aircraft carry letters, telephones, agents, representatives and the like: we use the term communication to cover air transport as well as post. When people, aircraft and electronic signals are transmitted through the air, they are all effectively messages and messengers"; they are postmodern angels.

In addition, Irigaray considers the angel as a messenger of potential and possibility in current society (in Johnston 2010:195). Irigaray's angels are filled with potential to defy the norm, transcend space and destroy the monstrous as she explains: "[a]ngels destroy the monstrous, that which hampers the possibility of a new age; they come to herald the arrival of a new birth, an new morning" (Irigaray 1993:15). Just as Serres and Irigaray's angels transcend space, are omnipresent and evoke expressions of awe, so too do astronauts literally transcend space, and satellites become omnipresent messengers and the space mission often evokes a sense of wonder from onlookers. Mir plays with the similarity throughout her images as clearly seen in *The passion* (Figure 50) where the astronauts are paired with angelic entities, indicating their correspondence.

Figure 49: Aleksandra Mir, *The passion*, 2009. Paper collage on board. (Mir 2015).

Figure 50: Aleksandra Mir, *The passion*, 2009. Paper collage on board. (Mir 2015).

Furthermore Mir's work demonstrates the concept of escapism. As discussed in the film *Gravity* the technical spectacle of the spacecraft launching from earth demonstrates the gnostic desire to escape from evil and the challenges on earth (Romanyshyn 1989:21). Mir uses the spectacle of space travel throughout *Aim at the stars*, as she depicts religious figures seemingly in admiration of the space shuttle, and its potential. In one of the 23 images in the series, an image of Jesus is placed alongside a satellite, in such a way that it seems as if He is looking up, towards the satellite, as He would towards God (Figure 51). This could perhaps imply that the manner to achieve transcendence could be through the means of technology. The human soul then also places hope (to escape) in technology. In a similar image (Figure 53) Jesus is shown holding a satellite as He is often portrayed in popular religious imagery, holding a bible or the lamb, as seen in Figure 54. It is as if Mir presents Jesus as endorsing or recommending technology as a means of absolution or vindication, arguing that technology has the potential to free the human soul and arrange a meeting with the divine. Extending this notion another image of a religious icon is shown praying towards a space shuttle, flying into space (Figure 52), stressing once more the conflation of religious and astronautic images.

Figure 51: Aleksandra Mir, *Aim for the stars*, 2009. Paper collage on board. (Mir 2015).

Figure 52: Aleksandra Mir, *Aim for the stars*, 2009. Paper collage on board. (Mir 2015).

Figure 53: Aleksandra Mir, *Aim for the stars*, 2009. Paper collage on board. (Mir 2015).

Figure 54: A popular so-called 'holy card' or 'catholic card' where Jesus is depicted holding a lamb. (Catholicshopper 2013).

Echoing the notion of rebirth in *Gravity*, which is associated with the gnostic journey of the soul, some of Mir's works also show the astronautic body, floating in space attached to the space craft, which as Romanyshyn (1989:18) suggests represents the reincarnation of the foetus being reborn through technology. This is evident in *Astronauts* (Figure 55) where this same image is once again seen, with added religious iconography. Once again the umbilical cord of cables attaches the astronaut to the space ship. With the added image of faith, it appears as if the technological rebirth although miles from earth is still within the space of the divine.

Figure 55: Aleksandra Mir, *Aim for the stars*, 2009. Paper collage on board. (Mir 2015).

The final gnostic trend visible in Mir's space collages is the ignorance of ethical and societal norms. Gnosticism often disregards societal rules, as gnostics only believe in adhering to a divine system of order. Correspondingly, Mir does not show a regard for conventions and boundaries. She creates images that could spark much controversy, owing to the sensitive subject matter. She "is disruptive and ever-evolving; audience reactions are often just as crucial as the initial piece itself. And, best of all, her work refuses to stick to national borders, observe the codes, follow the peace, comb its hair, and keep to itself" (Bollen 2003).

Together, the space journey in *Gravity* and the astronauts in Mir's artworks, evokes comments on posthumanism, which (as established) forms a critical part of Gnosticism in current society. If posthumanism is considered to be the transcendence of nature through the means of technology, then the astronaut overcoming the laws of nature (gravity) by merging with a technological space suit and craft, in order to travel through space and escape earth, is the embodiment of posthumanism. In addition, *Gravity* and Mir's work suggests that this integration of the human body and technology—in the form of the astronaut—is not only in the pursuit of extending humanism, but it is also aimed at achieving transcendence and escaping the bodily prison. To put it in Heideggerian terms, the technology of space travel *enframes* nature as a *standing reserve* ready to be used to escape the limitations of the earth. The astronaut is the posthuman searching for the transcendent, the technological body seeking the spiritual through the means of technology.

Hence, the gnostic posthuman phenomenon, as it manifests in the astronaut, poses an important debate concerning the relationship between technology and the soul. Wittcox (2014) suggests that this aligning of science and faith brings forth important questions regarding the notion of the soul such as:

> What is the purpose of leaving and going so far away? How far away from home can you go, and still be relevant to the people you left behind? What happens to the ego when tangible references vanish? Is the risk worth it? Is scientific discovery a way to meet or to challenge God? And is extreme solitude a path to self-realisation [sic] or simply a process to verify one's existence among others?

This highlights the ongoing debate of the posthuman future: *does posthumanism have the potential to enhance and save the soul, or does it hold the threat of destruction and detachment of the soul?* To a certain extent the notion of the astronaut, as it is presented in *Gravity* and Mir's work, argue that posthuman technology has the potential to aid in transcending the soul, since the space journey sets forth the soul's gnostic journey.

Posthumanism perhaps argues that humanity should consider taking *the leap of faith* towards posthumanism in pursuit of escaping the evil of earth (if a gnostic perspective of the world is followed). However, visual culture also considers the other side of this debate on posthumanism. What follows is an analysis of the film *Never Let Me Go* (2010) to consider the danger posthumanism holds for the gnostic soul.

3.3 An eye for an eye, a tooth for a tooth

A controversial technological advancement in current society is the cloning of human beings. Just as the astronaut is considered to be posthuman, so too is the cloned being. In essence, a clone is a precise genetic copy of an organism from which it originates, created through the means of technology (Agar 2002:21). There exists a captivation as well as a simultaneous fear of this phenomenon as it is uncertain when and how human cloning will start to take place, and moreover it is uncertain to what extent human cloning will effect who and what beings think they are (Toffeletti 2007:148). Essentially, how will a clone impact what we think about the self, or, in terms of this study, the soul?

From a gnostic point of view, the posthuman clone defies the limits of the body. It can be argued that the disgust that the gnostics harbour towards the materiality of the body, as well as their strife towards escaping immortal flesh, is perpetuated in the transhuman pursuit of cloning. Baudrillard (1990:116) explains that cloning can overcome the body in two ways: firstly, a clone's organs can be harvested and transplanted in the 'original' being leading to immortality; secondly, a clone itself is an asexual non-human, which marks the end of the limitations of the body and becomes the utmost extension of the self. Accordingly, cloning realises the gnostic notion of surpassing bodily matter. If this is the case, then should cloning not be the ultimate utopian objective? Fortunately (or unfortunately) the case of cloning is not as simple, because it is a process of duplication. Since a clone is an exact replication of a being, several points of concern occur, for instance, what happens to the (gnostic) soul once the prison of the body is escaped through technological reproduction?

If the above discussion of the astronautical body is followed, then a logical deduction could be that the posthuman clone, corresponding to the posthuman astronaut, may then also assist the gnostic soul towards transcendence. Yet, in *The Transparency of Evil* (1990) Baudrillard (1990) argues that the copied clone does the exact opposite - it eliminates transcendence. For Baudrillard (1990:120-121) a duplicate of an organism results in the collapsing of a

subject/object relation, which creates "a body immanent to itself, deprived of otherness, of contextuali[s]ation, of transcendence (…) definitively removed from any possibility of resurrection". Baudrillard (1990:118) refers to Walter Benjamin's argument on the work of art in the age of mechanical reproduction to explain what happens symbolically to the body during the process of cloning. According to Benjamin (1970), when an original work of art is mass-produced, it loses its "aura" or authenticity - that which makes it unique; in turn the original of the artwork is lost. Similarly, for Baudrillard (1990:119), the same phenomena occurs during the process of cloning - the body loses its uniqueness, its "aura" or then its soul through reproduction, while the original body is lost through the technological embodiment. This self-destructive process becomes what Baudrillard (1990:122) refers to as "the transparency of Evil".

In light of films such as *The Island* (Bay 2005) and *Moon* (Jones 2009), it is evident that popular culture often depicts these fears of cloning, which Baudrillard outlines. Recently, the film *Never Let Me Go* (2010), directed by Mark Romanek, also took on this controversial subject matter by negotiating the effect of the clone as a posthuman body. *Never Let Me Go* opens with the still of a woman in front of a large glass window in a hospital, looking at a young man lying on an operating table (Figure 56). While she looks at the man, she commences with a narration that recounts their lives, explaining through the course of the film how they ended up at this particular time and place, looking at each other through an operating room window. The visual imagery of the scene shows the reflection of each character in the window. Thus as the women looks at the man lying on the table, she also sees herself, just as he sees her and the reflection of him lying on the table (Figure 57). This establishing image immediately brings to mind the visual of the astronaut looking through a window in *Gravity*, contemplating its soul, which is a topical point throughout this chapter. However, when the woman starts to tell their story, the viewer realises that the window of the hospital room is not a technological entity through which they mediate their existence. On the contrary, it becomes clear that the man and woman themselves are the source of technology, looking through a window at each other. They are clones that were created in order to fulfill the gnostic posthuman ideal: to aid in overcoming the mortality of the human body, by donating their organs to those in need.

Figure 56: Still from the opening scene of *Never Let Me Go,* 2010. Screen shots by the author.

Figure 57: A man lies on an operating table during the opening scene of *Never Let Me Go,* 2010. Screen shots by the author.

The woman looking through the glass is Kathy H, a 26-year-old technologically cloned woman. She proceeds to tell the story of herself, Tommy (the man on the table) and their friend Ruth, who form part of a society within the larger society, consisting of children who were created in a laboratory to be 'Donors'. They exist to grow organs for their originals, until the donations become too much for their bodies to sustain, and they die (Romanek 2010). Brought up in an environment where this is the norm, these clones accept their fate and often take pride in their purpose. The film depicts Tommy, Kathy and Ruth, following the quintessential makings of a love-triangle, cruelly forced to exist under the constraints of their technological existence. As they grow-up in an experiment-based boarding school, the audience, along with the teachers at the school, are left to consider whether or not these organ machines actually have souls and are able to love others, or whether they are, as Baudrillard (1990:120) suggests, mass produced bodies deprived of transcendence.

From a gnostic perspective the clones in *Never Let Me Go* appear to show clear traits of the gnostic soul, instead of just being pure evil matter, as Baudrillard foresees. Therefore it is

worth interrogating whether or not the gnostic journey of the soul is present in the narrative of Tommy, Kathy and Ruth. The clones in *Never Let Me Go* are separated from the rest of the world. They are physically alienated from society and kept away from human interaction. This alienation is evident during the scene of Ruth's death as "the various operating staff finish up. Scrub down. Exit. Leaving Ruth, her cadaver, on the operating table. Alone" (Romanek 2010). Ruth's death does not contain any undignified, desperate attempt to keep her alive, she is simply left to pass on, no harm, no foul, emphasising her isolation from the world. The clones' experience of alienation is also highlighted in their desperate pursuit to find the humans on whom they were based or from whom they were created (their 'originals', as Baudrillard would argue). Kathy searches through several magazines to find who she was modelled on, while Ruth is left heartbreakingly disappointed when they go on a trip to find her possible match, who turns out not to resemble her. Ultimately the sense of solitude is manifested in the final scene of the film. The audience is taken back to the first scene, where Tommy is about to undergo his final donation and they are isolated from one another, stuck on opposite sides of the glass as Tommy then dies. The film cuts to Kathy who gazes out over an open field, alone, hoping to see Tommy again, while she thinks back on their time together, awaiting her own forthcoming donations and lonesome death. This aloneness is symbolic of the human condition, and gnostic belief that we are born alone and we die alone.

Comparable to the gnostic soul, the technological clones also attempt to escape their fate, in order to prolong their lives. Tommy and Kathy learn that there is a possibility of obtaining a "deferral" - a temporary relief from donations - if two donors can prove that they are in love. They assume that, because they were often required to create works of art at school for a mysterious Gallery, they are required to prove their love by displaying their artworks. They reason that the art would allow officials to look into their souls and verify whether or not they were truly in love as the art "reveals your soul" (Romanek 2010). In an attempt to escape their imminent deaths, and stay together longer, Kathy and Tommy visit the headmistress of the boarding school to apply for a deferral. However, during this visit the viewer learns that no escape is possible, since there are no deferrals. The headmistress explains "we didn't have the Gallery in order to look into your souls. We had the Gallery in order to see if you had souls at all" (Romanek 2010). The only manner through which the clones can escape the world they are bound to, is by completing their donations and escaping from their own bodily hell. This notion of entrapment from which they cannot escape is emphasised by the tracking systems planted in their arms, which they constantly have to swipe when entering and exiting

a building. There is thus no means (or technology) of escaping the world to which they are confined. They are caged in by the very technology that created them. In this manner the clones are also bound by the "hell of the Same" (Baudrillard 1990:122), which is the confinement of their reproduced physical bodies.[11]

It is apparent in the film *Never Let Me Go* that the clones manifest vital traits of the gnostic journey, which include a sense of alienation and a need for escaping from the evil realm. Therefore it can be argued that since the clones also show characteristics of the gnostic soul, the film contradicts Baudrillard's notion of the cloned body as a body deprived of transcendence. Statements throughout the film also confirm that it can be considered that these clones have souls or at least an equivalent transcendental nature to their copies. For instance, Kathy begins the film by saying "that said, we are not machines", and in her closing lines comes to the conclusion "what I'm not sure about is whether our lives have been so different from the lives of the people we save. We all complete. And none of us really understand what we've lived through. Or feel we've had enough time" (Romanek 2010). Kathy, in her contemplation through the metaphorical window into the soul, comes to the conclusion that they too follow a gnostic path. As a result, it can be argued that the clones are possibly ensouled beings that are created by technological advancements.

Accordingly, in the background of the gnostic notion of ethical considerations, *Never Let Me Go* challenges conceptions of the posthuman, such as Baudrillard's theory of the soulless cloned body. Ultimately the film disregards these common ideas of clones by portraying the journey of three clones. These journeys prove to follow the common trends of the gnostic soul. In addition the clones are then also considered in the realm of the divine as they are

[11] Despite this tragic fate, it is shown that there is still an awareness of achieving salvation or intimate gnostic knowledge amongst the clones, likened to that of the gnostic soul. Nearing her death, Ruth asks for Tommy and Kathy's forgiveness for keeping them apart. She realises her mistake arguing that "it's the worst thing I ever did and now I want to put it right (…) I've had years to think about what I did, and years to work out how to make it better" (Romanek 2010). Ruth achieves the insight to see what she did wrong and attempts to make it right in order to find peace and forgiveness for her soul. In an attempt to right her wrongs, Ruth gets Tommy and Kathy the address of the person they need to see for the so-called deferrals. Right before she dies Kathy tells Ruth they have decided to take her advice and apply, when she leaves the room, Ruth closes her eyes and breathes a sigh of relief (Romanek 2010). She has redeemed her soul. In turn, Tommy and Ruth achieve a sense of relief or peace to their souls in their love for one another; they are "in love. True love. Verifiable" (Romanek 2010). This unconditional love reminds the audience of the similar religious notion, is stressed as Kathy embraces Tommy after he screams in great frustration of his earthly entrapment.

grounded in the religious notion of unconditional love. From a gnostic perspective the film thus poses controversial questions, such as *can the posthuman body be soulful?* Furthermore, if feasible, *are the consequences of this technology then that these beings are treated in the same manner as human beings or as the 'transparency of evil'?* As *Never Let Me Go* evokes a sense of sympathy for the clones, perhaps Romanek (2010) suggests that the posthuman clone, within the gnostic realm, is not pure evil as Baudrillard suggests, but rather once again a means of escape from the evils of earthly matter, such as the human body. In turn, the clone itself also shows essential characteristics of a gnostic soul's journey, and therefore evokes transcendence.

3.4 God*speed*

Theorist Paul Virilio (2005) comments on the posthuman future with a warning, maintaining that an increased obsession with the speed and augmentation of technology leads to a "university of disaster" an "original accident" with a destructive power. Unlike the above visual examples, Virilio does not see posthumanism as an escape from earthly matter, but rather a derailment with hyper violent, perhaps evil, consequences. Following Heidegger, Virilio also applies an autonomous power or force to technology. This force (for Virilio) is one of disaster and destruction since:

> [t]o invent the sailing ship or steamer is *to invent the shipwreck*. To invent the train is *to invent the rail accident* of derailment. To invent the family automobile is to produce the *pile-up* on the highway. To get what is heavier than air to take off in the form of an aeroplane or dirigible is *to invent the crash*, the air disaster (Virilio 2005:10).

Therefore, Virilio's theories can be interpreted, from a gnostic perspective, as an acting out of the hatred of matter, with technology, as well as its accompanying accident, as a part of this evil earthly matter. In *The original accident*, Virilio (2005:11) also calls for a prominent acknowledgement of the accidents that co-occur with each technological invention. To a certain extent, the realm of the visual has adhered to this call by demonstrating accidents and the extent of the consequences of technology.

An example of such as visual representation is David Cronenberg's controversial film *Crash* (1996) based on the novel by J. Ballard (1973), which comments on the technological effects of the car: the car accident, or as Virilio (2005:10) says "the pile-up on the highway". In his essay *Ballard's Crash* (1991), Baudrillard comments on the narrative of the novel, which is also then depicted in the film. Baudrillard (1991:108) explains that Ballard portrays

technology as "the mortal deconstruction of the body - no longer a functional medium, but the extension of death". Ballard's *Crash* tells the story of a TV director who was in a serious car accident, where after he becomes involved in a fetishised underground group who use car crashes in a pursuit for sexual pleasure. In this manner *Crash* places the body within the violent nature of technology and at the same time demonstrates the extreme destruction of the body that takes place during the technological accident (Baudrillard 1991:109). As evil matter, the combination of the body and of technology in a car accident results in immanence (Baudrillard 1991:109). Hence, in light of Virilio and Baudrillard's understanding of technology, *Crash* argues that in the wake of the technological accident, which combines the body - and in this case sexual desire - with the automobile, transcendence becomes impossible and the gnostic soul is lost.

In 2004 Paul Haggis released a film also entitled *Crash*, which likewise presents a narrative constructed around the phenomenon of the car accident. The film opens with a black screen, and the audience hears "the sound of a violent rear-end COLLISION, brakes locking, metal crunching, tires skidding as a car spins, horns blaring, gravel spitting. Then silence. We start to glimpse faint, unfocused images of flashing lights" (Haggis 2004). The film literally sets the scene with Virilio's technological (car) accident, as the automobile becomes the pile-up on the highway. However, where Cronenberg's *Crash* portrayed an accident filled with immanence, Haggis's *Crash* from the very beginning of the film places the phenomenon within the realm of transcendence and connection, a voice over tells the viewer:

> It's the sense of touch (…) Any real city, you walk, you're bumped, brush past people. In LA no one touches you. We're always behind metal and glass. Think we miss that touch so much, we crash into each other just *to feel something* (Haggis 2004, emphasis added).

Accordingly, Haggis's *Crash* focuses on transcendental serendipity, connection and chance that possibly comes with a technological wake (LeVan 2012:2). Therefore, the film may be considered as an alternative to the above discussion of accidents as posited by Virilio and Baudrillard. LeVan (2012:1) suggests that with every accident a new world arrives and humanity is transfigured. Furthermore, these technological accidents, which often end in death, changes relationships, spatial relations, language, perceptions, and insights, which can lead to joy and beauty. He argues that instead of fearing this arrival it should be embraced since "the accident thus is what gives us a chance at insight and creation. The accident, in this sense, needs to be pursued. Chase the wreck" (LeVan 2012:3). Haggis's film manifests this

potential of accidentally *Crash*ing into one another - "it offers an unusual view, seeing collisions between people as capable of bringing down society's divisive barriers" (Stewart 2007:55). *Crash* chases and collides head-on with the wreck.

Inspired by the director's personal experience of a car high-jacking, the film depicts short snippets of various violent collisions and ethical encounters between the diverse people of the city of Los Angeles. Several different characters' storylines and fates interweave as they crash into one another (Farris 2007:354). Set in a post-9/11 America, the film addresses the ethical problems of prejudice and racism between different ethnicities (Kimball 2008:133). When the characters collide, fears, prejudice and anger are expressed and (in some instances) overcome. Several comments have been made about how the film showcases discrimination and in doing so it becomes a medium of transformation for the American audience (Kimball 2008; Farris 2007; Middleton 2007; Villaba & Redmond 2008; Kempf 2008). Yet few recognise the role of technology and the technological accident, as well as the journey of the gnostic soul, in this transformation that the film so clearly displays.

By placing emphasis on the racial relations in the film, the element of technology is often forgotten. However, the rear-end collision at the beginning of the film as well as the setting of Los Angeles (famous for its mass car culture), immediately places the automobile and its accompanying accident at the forefront of the storyline(s) and thus it cannot be ignored.[12] Every major collision between characters involves some sort of technological vehicle or weapon as the audience witnesses high jackings, break-ins, assaults, hitch-hikings and several other confrontations in which the automobile is always at the centre of events.

Crash takes the relation between the soul and machine and places it at the centre of a story, which displays a gnostic journey of transformation. Unlike Cronenberg's *Crash,* which eliminates any sense of divinity, Haggis's film has clear symbols throughout which represent

[12] The automobile is a technological being in its own right that has become "the machine that changed the world" (Roos, Jones & Womack 2007). Additionally, in the act of driving a vehicle the technological car becomes an extension of the driver's body and senses, since the driver feels and experiences the dimensions of the car's steel structure (Urry 2006:24). Driving also always encompasses some sensation or experience associated with the soul. For example, it evokes emotions such as exhilaration, freedom, desire, frustration and vulnerability (Urry 2006:24). Therefore the automobile in its own right already manifests an important relation between technology and the soul as often seen in several car advertisements that claim to combine man and machine (Urry 2006:24).

the realm of the sacred and places the film in a spiritual background. Firstly, the use of multiple storylines or segments reminds the audience of parables of hope (Farris 2007:356). Within these parables the characters not only represent different races but also religions, as one character is labeled a Buddhist, as an example. Secondly, the film takes place over Christmas time and nativity sets and decorations are often seen throughout the film. Thirdly, the setting of Los Angeles, known to be the city of angels, also encourages a sense of the divine and religion (Kimball 2008:134-135). Consequently, the sacred is clearly visible in *Crash* (Kimball 2008:135).

Judging by the title of the film, the gnostic notion of collision is implied throughout. The notion of opposing races, classes, bodies and technologies *Crash*ing into one another literally and symbolically reflects the same principle of Gnosticism. The collisions allow for the negation of oppositions and differences in order to progress. The crashes are thus not merely physical, but also a passionate crash of consciousness. These collisions result in soulful reactions. True to gnostic thought, it is within these soulful responses that the film unearths a possibility of the sacred (Kimball 2008:157). For Kimball (2008:157), each collision in the film contains a literal and metaphorical force, which disrupts, but also evokes the sacred. Each accident or crash "thereby opens an opportunity for everyone to turn their aggrieved gaze back on themselves and ask why they feel so vulnerable" (Kimball 2008:157). It is within the collision with the opposite that gnostic insight and knowledge is revealed.

This collision is best illustrated in the *Crash* of a character named Christine with a police officer, Ryan. Early in the film, Ryan (a white man) pulls over a black man and his wife (Christine) late at night. In an act of racial intolerance Ryan accuses the driver of the vehicle of driving under the influence of alcohol (even though it is later revealed he is a Buddhist and does not drink) and orders them to get out of the car. He then proceeds to molest Christine with her husband helplessly standing by. This shocking scene in the film demonstrates the meeting of two polarities and the prejudice that accompanies such encounters. Later on in the film, Ryan responds to an emergency call concerning a car accident in which a car overturned and a woman is stuck inside. As he arrives on the scene and tries to help the woman he discovers that it is Christine, the woman he assaulted. When she recognises the police officer she begs him to leave her. He looks at her and (as the screenplay reveals) "sees her pain and humiliation, and knows he was the cause of it" (Haggis 2004). It is after that moment that he talks to her with a sense of respect and calmness - he is thus transformed. Finally, Ryan risks

his life in an enflamed vehicle to pull Christine out in "an act of atonement and reparation" (Kimball 2008:156). This car crash and technological accident therefore acts as a force that transforms two opposing people, emphasised at the end of the scene as they embrace each other filled with gratitude (Figure 58).

Figure 58: Ryan and Christine clinging to each other after they escape death together, *Crash*, 2004. Screen shot by the author.

Indicated by the voice-over at the start of the film, the diverse people before collision are alienated, alone, living in solitude. They are separated from each other by their technology. They are the manifestation of Turkle's (2011) notion of being "alone together". The words "we miss that touch so much, we crash into each other just so we can feel something" highlights the extent of the loneliness, the "deep chasm of alienation left in the wake of unresolved differences" (Stewart 2007:55). The detective (the voiceover) argues that the people living separate lives, specifically in *Crash*'s portrayal of Los Angeles, are so detached that they unconsciously desire to collide with one another, if only to escape their loneliness.[13] This correlates with the sense of alienation often encountered by the soul in Gnosticism. Each character depicts this loneliness in their life story: Farhad, the hard working Persian-immigrant store owner is isolated by his language barrier and is unable to connect and understand English properly; Detective Graham is estranged from his mother and accused of keeping everybody at a distance; Jean and Rick Cabot are stuck in a lonely and unhappy marriage and throughout the film Jean realises that she is terribly alone; Hansen, another police officer, is forced to ride alone on duty; and so forth each character's alienation can be identified. It is then through the technological collisions and the sense of touch that the characters unconsciously wish to escape their loneliness, as well as the prejudice (evil) they

[13] Stewart (2007:58) argues that the Los Angeles car culture, as depicted in *Crash,* maintains the illusion that "opposites can be kept separate and an isolationist police of living maintained."

encounter every day. Ironically, it is the technology that alienates the gnostic soul, yet it is co-occuring technological accidents that bring the souls together and closer to transcendence.

In similar fashion to *Gravity* and *Never Let Me Go,* Haggis's *Crash* also uses the notion of the window, this time in the form of the car window, to emphasise this alienation. The voiceover maintains that people are stuck behind the "metal and glass" (Haggis 2004). They observe others through a barrier, which in this case is the technological automobile. The window motif is constantly present throughout the film as characters drive in their cars, looking out the windows. At the end of the film each character is also seen looking out of different windows (a house window, a car window, and a window of a train) contemplating the collisions they encountered during the two days portrayed in the film (Figure 61). Similar to the rear-view mirrors in the automobile, the window becomes a place of reflection from where the characters contemplate their being, their souls. Moreover, *Crash* br(e)akes the barrier of the window through the collisions. This is best demonstrated in the scene where Ryan comes to Christine's rescue. The audience sees Christine's view through an upside-down, broken car window (Figure 59), followed by her and Ryan interlocked pulled through one of these windows (Figure 60). In this manner, the film crosses the boundary of the window and the barriers of the soul.

Figure 59: Looking out of the upside-down car window, *Crash*, 2004. Screen shot by the author.

Figure 60: Christine and Ryan pulled out through the car window, *Crash*, 2004. Screen shot by the author.

Figure 61: Various characters in the final scenes of *Crash* looking out windows, 2004. Screen shots by the author.

As mentioned, the collisions and technological accidents throughout the film lead the characters towards gnostic insight or knowledge. Most of the characters experience a sense of catharsis, freedom, salvation, rebirth or growth after they collide with one another and technology. *Crash* confirms LeVan's (2012:3) argument: "Whether it arrives as a disaster, or a stroke of luck, or a manipulated wreck, the accident initiates transformation. Accidents both

disfigure and transfigure. They change the world, and thus change how we orient ourselves to and inhabit the world." Stewart (2007:58; 59) contends that the collision of dualities throughout the film leave characters feeling vulnerable, which allows them to change. Most of the characters experience a sense of redemption, similar to that of Ryan's. For instance, as Jean *Crash*es down the stairs and her housekeeper is the only person to help her, she accepts her vulnerability, lets go of her anger and expresses her gratitude. She hugs the housekeeper, unable to let go. She is renewed and a sense of well-being rises within her. Accordingly, in the film, the technological accident leads to the gnostic revival of the soul.

This realm of transcendence and transformation not only occurs amongst the characters in the film, but also for the audience watching. *Crash* allows the audience to collide through the "fourth wall" of the cinema with dramatised encounters that they are often confronted with in everyday life (Stewart 2007:61). In this manner the film holds the potential for healing and new insight on how to address cultural *Crash*es in society. Kempf (2008:91) maintains that this is what makes the film important, it raises a conversation that can touch and change the souls of many.

If the film is interpreted from a gnostic point of view, then it also becomes evident that some of the storylines in the parables can be likened to religious recounts. At the beginning of the film, Farhard, the Persian shop owner, buys a revolver to protect himself. His daughter, however worried about how her father will use the gun, replaces the bullets with blanks. Owing to his language barrier, Farhard does not recognise that the bullets are fake. In another parable, Daniel, a hard-working Hispanic locksmith arrives at home only to find his younger daughter afraid after she heard a gunshot. In order to comfort her he gives her an "invisible impenetrable cloak" which he tells her can prevent any bullets from harming her. Later on in the film these two parables collide. After a series of events Farhard believes that Daniel broke into his store, since he hired him to change the locks. He locates Daniel's house and travels there with his gun. As Farhard pulls the trigger, Daniel's daughter jumps in front of the bullet to protect her dad with her "invisibility cloak". In a dramatic scene, which becomes a crucial image of representation for the film, Daniel is shown embracing his daughter, horrified that she has been shot. After some time both Farhard and Daniel discover that by some miracle the girl is unharmed. Only the viewer realises that it is the blank box of bullets that were replaced by Farhard's daughter that is the true miracle.

As Farhard thinks about the events he calls Daniel's child his "angel", unaware that his own daughter is his true angel. Kimball (2008:153) argues that the act of renunciation made by both daughters for their parents reminds of the Eucharist notion of sacrifice. Both of these daughters show selfless love towards their fathers. Similar to the astronaut's leap of faith in *Gravity*, Daniel's daughter takes a leap of faith to protect her father, evoking the sacred characteristic of selflessness.[14]

In addition, the statue of the patron saint of travel, Saint Christopher, which was first noted in *Gravity*, also appears in *Crash*. Anthony and Peter, the stereotypical embodiments of the so-called 'black gangsters', highjack and steal cars. Peter travels with a tiny statue of Saint Christopher wherever they go, arguing that the patron saint will protect them. Ironically, it is because of Saint Christopher that Peter dies. Hiking a lift with an off-duty officer Hansen, Peter recognises that Hansen also has a statue of the patron on his dashboard. Taking out his statue to show Hansen that they do not differ that much, Peter reaches into his pocket. Hansen, inflicted with prejudice immediately thinks Peter is going to pull out a weapon. He shoots Peter without any hesitation in his car. In this parable the only sense of salvation lies in the audience hopefully recognising the severe and sad consequences of racial judgment, as both characters fall victim to the evil of racial prejudice (Kimball 2008:150).[15] Thus the presence of Saint Christopher evokes the gnostic worldview of the evil versus the good, as well as the gnostic supernatural being.

Nevertheless, *Crash* shows that the technological accident can be seen as the gnostic collision through which salvation can occur. The film depicts how the colliding of bodies (both technological and human flesh), sometimes violently, other times subtly, allows for an awakening of the gnostic soul. Haggis contradicts Virilio and Baudrillard's warning against the consequences of the speed of technology, by emphasising the transcendental potential of the technological accident, perhaps identifying a "God*speed*". This potential is emphasised at the end of the film where the audience is left with a sense of hope "as we rise we see the twisted chaos of the intersection, the cars and the people and the Illegals disappearing into the

[14] The daughters also then symbolise that Los Angeles is the mythical city of angels (Stewart 2008:61).
[15] Kimball (2008:150) explains that the fear of the other is interpreted as the evil of the other as people usually reject the abject. In this sense, prejudice is the fear of the other, which is interpreted as evilness.

maw of the churning city. And it starts to snow" (Haggis 2004). In the official trailer of the film the following words appear: "we are moving forward, we are coming together, we are falling apart. When you're moving at the speed of life, we are bound to collide with each other" (Haggis 2004a). Thus, one thing Haggis and Virilio agree on is the inevitability of the technological collision, but Haggis chooses to see this collision in light of the sacred, instead of evil. Haggis's *Crash* therefore depicts the gnostic soul's journey, aided by technology. Perhaps then the technological accident is depicted as a blessing in disguise in the gnostic sphere.

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This chapter has illustrated a dualistic view of technology and the soul, as manifested through a gnostic belief. Gnosticism, as a dualistic outlook, argues that the soul and the body are separate entities. Furthermore, the gnostic realm believes in a world divided into two separate spheres: one filled with evil earthly matter (including the body) and the other a sacred, good place of divinity (including the soul). According to gnostics, human beings are born into the evil realm, with a transcendental soul trapped within the human body. It is the goal of the gnostic soul to escape from the evil worldly matter, to the divine realm and achieve a state of gnosis, or then transcendence. Thus the gnostic perspective evokes the soulful and transcendental parameters of the continuum that this study aims to follow. Gnosticism also encompasses pertinent trends such as the notion of good versus evil, a sense of alienation and solitude, a desire for intimate knowledge and salvation, the belief in supernatural beings, a disregard for ethical boundaries, the collision of dualities and the notion of escapism. Although an ancient religious school of thought, Gnosticism is also present in the twenty-first century and Digital Age, where the role of technology in the gnostic soul's journey is often contemplated and the detestation for the human body is overcome in the form of posthumanism and transhumanism.

Embodying seminal theorists on technology, such as Virilio, Baudrillard, and Heidegger, various visual examples are provided to comment on the place of technology within the gnostic world, mostly arguing either for or against the transcendental nature of technology. These examples include *Gravity* (2013), various artworks by Aleksandra Mir (2009), *Never Let Me Go* (2010), as well as *Crash* (2004). As demonstrated throughout Chapter 3, these visual representations respectively present a relation between technology and soul from a gnostic outlook.

Caurón's *Gravity* takes the first (small) step for mankind and displays the technology of space travel that acts as a means to the literal journey of traveling through space, as well as to the metaphorical journey of the soul to reach a state of transcendence. The film suggests that technology becomes the means or an aid through which the evil matter of the world can be overcome. It also argues that technology can be a site through which rebirth can occur. Echoing these thoughts on the technology of space travel, Aleksandra Mir, through her collage-like artworks, illustrates that similarities occur between the technology of space travel and the spiritual realm, arguing that technology is part of the spiritual journey, or a logical progression of the journey to the divine. Both these visual portrayals, if interpreted from a gnostic point of view, argue that the astronaut is a form of gnostic posthumanism, which aims to overcome immanent earthly matter - by literally and figuratively providing a means to transcend the confides of the earth.

An alternative form of posthumanism, presented by the film *Never Let Me Go*, is cloning. As another giant leap for mankind, cloning provides a manner to conquer the immortality of the human body, however creating a technological being that is an exact duplicate of the human becomes a complicated debate. The film introduces the ethical contention surrounding technological clones: firstly, clones can either be considered to be pure evil earthly matters that eliminates the gnostic soul; or secondly, they can themselves show traits of the gnostic soul's journey and search for their own transcendence, with the implication that technology could undergo its own autonomous journey of the soul.

In contrast to the gnostic understanding of posthumanism, sometimes technology is interpreted as a part of the evil realm of the gnostic sphere, a destructive vile force (similar to the debris in *Gravity*) that leads to the annihilation of humanity and the gnostic soul. Virilio and Baudrillard illustrate this by examining the technological accident that occurs because of the vast speed and development of technology, as well as the 1996 film *Crash*, which shows immanence in the collision of technology and the human body. Yet more recently another film with the same name decodes the technological phenomena in another manner, removing technology from the pure evil realm and once again depicting it as a method to overcome matter and achieve transcendence. *Crash* (Haggis 2004) contradicts its predecessor by arguing that technology detaches us from the divine, but the accompanying technological accident holds the potential to re-introduce transcendence and transform the gnostic soul.

Thus, if all of these visual examples are considered, it can be reasoned that, from a dualistic, gnostic perspective, technology can either become a means or an aid in the journey of the soul towards the transcendental. Once again technology is, in Heideggerian terms, in standing reserve, ready to enable the soul on its journey to escape from the evil towards the good. At the same time technology can also become a manifestation of pure evil destroying the soul. In this sense technology also exists as a duality: it can lead to alienation or entrapments, as well as escape, it can be good and evil, it can reveal knowledge and conceal it, and finally it can connect to the transcendental and the same time separate us from it.

Following the gnostic perspective on technology and the soul, the next chapter, Chapter 4, aims to interrogate Gray's final viewpoint on the soul, physicalism, through visual examples such as *Wit* (Nichols 2001), *Transcendence* (Pfister 2014) and artworks by American neuroscientist Greg Dunn. In view of the animistic and gnostic perspective, it is considered whether the opposing outlook of physicalism (which denies the existence of the soul) is considered to be proficient in the current Digital Age.

CHAPTER FOUR
SELLING YOUR SOUL: A PHYSICALIST VIEW OF TECHNOLOGY (AND THE SOUL)

<< soulless : immanence >>

You can have all the faith you want in spirits, and the afterlife, and heaven and hell, but when it comes to this world, don't be an idiot. 'Cause you can tell me you put your faith in God to put you through the day, but when it comes time to cross the road, I know you look both ways
- Dr. Gregory House in the popular television series *House* (2004 - 2012)

Thus far, this study has discussed two main approaches to the soul and the body, namely monism and dualism. As these two perspectives have been part of an age-old binary, they are often seen as opposing views: monism refuses dualism and sequentially dualism refuses monism. However, both Gray (2010) and Crane (2000) argue that in contemporary times a third doctrine should be added to the debate, namely: physicalism. Introduced in Chapter 1, physicalism is the notion that everything, including emotional and spiritual experiences, can and must be accounted for in terms of physical matter (Gray 2010:642). Thus physicalism denies the soul, or reduces what is referred to as 'the soul' to pure physical matter such as neuroscience and genes. In terms of this study's binary parameters (a belief in the soul versus a denial of the soul and a belief in the transcendent versus a secular world) the physicalist view contrasts monism (as animism) and dualism (as Gnosticism), since it argues for a soulless and immanent existence. Through the perspectives of Gnosticism and animism the study has indicated that an intricate relationship exists between technology and the soul. However, physicalism brings another dimension to this relationship by introducing important questions such as, w*hat happens when only technology is left in the relation between technology and the soul?* Moreover, *is their validity in the removal of the soul from this relationship?*

In Chapter 2 and Chapter 3, the study identified various characteristics of the respective perspectives of animism and Gnosticism in relation to technology and the soul and then illustrated these traits through an analysis of visual examples. However, in this Chapter, the same structure cannot be followed, because physicalism portrays a different stance in terms of the soul. It is pointless to identify specific traits in relation to technology and the soul with

regard to a perspective, such as physicalism, which does not accept the notion of the soul to be true. This chapter therefore follows a different format to the previous chapters. Firstly, physicalism is discussed, contextualised and explained through selected neuron artworks created by Greg Dunn; secondly, the consequences of a worldview which denies the soul and favours matter and technology is analysed by referring to the television film *Wit* (Nichols 2001); finally, I speculate whether or not physicalism should be considered to be true or valid by providing a hermeneutic interpretation of the film *Transcendence* (Pfister 2014).

4.1 Theoretical underpinnings

In her discussion on the different contemporary views of soul, Gray (2010:638) mentions physicalism as an outlook on the soul that is notable and popular in the contemporary postmodern context. In fact, in the twenty-first century physicalism has become increasingly common (Papineau 2001:1). As discussed, physicalism is the belief that everything exists within the realm of the physical, thus anything that cannot be explained through physical matter is unreal and therefore does not exist. For instance, according to physicalists, spirits, ghosts, celestial beings and souls that are independent of a physical body do not exist. From a physicalist point of view, the world consists of material matter that adheres to the rules and laws of physics. Everything in the world originates from physical 'things' and "in accordance with its rules it's up to us to make sense of it" (Carroll 2011). Furthermore, physicalism encompasses several perspectives that are also fundamentally based on the idea that all phenomena extend from unchangeable physical laws, including materialism, mechanism, biological structuralism and vitalism (Papineau 2001:1).

Physicalism developed during the age of Enlightenment, stemming from empiricism and positivism.[1] A vital component of physicalism is empiricism, as it argues that everything that is considered to be real is recognised by sensory input. Papineau (2001:7) explains that "the crucial empirical premise is *the completeness of physics*, by which I mean that all physical effects are due to physical causes". Therefore physicalism is located within the methodologies of empiricism and positivism, while monism and dualism lean more towards a rationalist methodology. However, physicalism is considered to be an ontological doctrine

[1] Considering positivism as the premise that all knowledge is based on observable natural phenomena, Neurath and Carnap (in Stoljar 2015) both argue that physicalism is the combination of both empiricism and positivism.

and not a methodology (Papineau 2001:6), since it primarily focuses on explaining existence, reality and the nature of being in terms of the physical.

To classify physicalism the notion of what constitutes the physical requires clarification. The physical 'things' that constitute the world refer to matter such as atoms, molecules, cellular structure and the essential nature of phenomena. Crane (2000:4) explains that "the physical, after all, is the subject-matter of physics". This matter is controlled by the laws of physics (physical sciences) and can be observed, studied and explained. The realm of the physical, therefore, refers to anything that can be perceived by the senses and seems tangible as well as concrete, stemming from natural, observable substances. Physicalism, then in turn, maintains that everything in the world can be explained and traced back to physical matter. For example, physicalists argue that a person consists of complex chemical reactions and chemical interplay between atoms and cellular structures (Carroll 2001). Gray (2010:639) states that physicalism places great emphasis on cognitive studies, since all sensory input and output are processed within the brain. In addition, Pettit (1993:214-217) maintains that the physical world consists of microphysical entities that are governed by specific laws and regularities.[2] To identify and examine physical matter, physicalism relies strongly on visual imagery and technology (Botzer & Reiner 2005:147). These images involve the capturing of light, the juxtaposition of the everyday against images of wonder, perspective, symmetry, circular and wave-like structures based on radar capturing and the atomic model, mathematical shapes and curving lines (Rowland 2007:30-31).

The current Digital Age adds another element to the physical realm: technoscience. Firstly, in order for scientists to study the physical domain they are dependent on technology since they use technological instruments to study the matter of the physical realm. Secondly, as technology develops (and is developed within physical things) the digital and physical domains have become integrated or blended. The technological environment (including data, digital algorithms, pixels, bytes and many more) occurs as a unit throughout everyday life (Institute for the future 2009). Ihde (2009:23) suggests that technology and science have become a hybrid compound, to such an extent that theorists now refer to the two realms as "technoscience". The relationship between technology and science can be described as

[2] Kelly (2010:110) adds that the physical realm also consists of the constraints of geography, related genes and metabolic processes.

mutually beneficial (especially in terms of invention, material dimensions, human perception and embodiment), multicultural in its emergence, as well as diverse in its occupation of both material and digital space (Ihde 2009:59). Accordingly, physicalism places a great emphasis on technology. In addition, technology itself is an expression of physicalism. Technology is a phenomena that highlights the physical, especially when it occurs in relation to the human body:

> Physicalism in the present context, can be taken to be a theory of technology that prioritises its physical aspects, and the conjunction of these aspects with the physical aspects of humans. Physicalist theories therefore emphasise the technological artefacts themselves, along with the body, the senses, and the physical environment in which they are located (Lister, Dovey, Giddings, Grant & Kelly 2003:427).

Physicalism also stands in strong opposition to animism and Gnosticism, because it is "anti-religion" (Angel 2008:141). Angel (2008:142) explains that physicalism is based on three premises that place it as an antithesis to the spiritual or religious realm. These premises include: (1) the notion that physicalists argue that what occurs in physics, chemistry and biology is the entire totality of being, (2) this then implies that there is no transcendental being or world beyond the physical sphere, (3) thus opposes the existence of God and is notably anti-religious. In light of this, physicalism has also commonly been associated with atheism (Gray 2010:644). Atheism is the denial of an omnipresent, perfectly good, powerful disembodied being who is in control of and has created the universe, and therefore atheism is also a typical ally of physicalism (Fales 2007:118).

A discussion of physicalism, and physical matter, also often refers to the phenomena of micro structures and processes versus macro phenomena. Physicalism argues that micro entities constitute a macro world (Seager 2010:7-8). These micro entities refer to smaller and simpler forms of the physical realm (Pettit 1993:214). An example is water that consists of millions of molecules that, in turn, are made up of one oxygen atom bonded with two hydrogen atoms (H_2O). In this manner physicalism follows a so-called 'bottom-up' approach, where a change to the micro leads to a change in the macro entity, as there can be no "macrophysical difference without a microphysical one" (Pettit 1993:216). As the macro world supervenes in the micro world, physicalists also argue that anything considered to be macro can be reduced to a micro entity (Pettit 1993:219). The outlook mostly emphasises these two domains and

they are often revealed in the study of nature, emphasised by the wonder of both minuscule and enormous natural phenomena.

Reason and rationality form a critical part of physicalism because it is rooted in positivism and empiricism. The virtue of rationality denotes that a person accepts reason and logic as the only true source of knowledge, "it means a commitment to the principle that all of one's convictions, values, goals, desires and actions must be based on, derived from chosen and validated by a process of thought" (Rand in Landauer 2001). Acting rationally implies using logical approaches to eliminate contradictions by skillfully assessing qualities and applying induction to occurrences to explain them in the simplest form. It is this desire for reason that probes physicalists to search for a quantum theory that aims to explain the world in one simple, logical equation (Polkinghorne 1991:9). Physicalists aim to explain the world in basic, logical terms, pure and simple. As a result, physicalists use scientific methodology, which always involves postulating a hypothesis and proving it to be either true or false through experimentation, description, comparison and modelling (Carpi & Egger 2000).

This perspective often also deals with the fields of neuroscience and medical sciences, and relates to illness and disease (Whatley 2014:961). Wheatley (2014:962) explains that "[m]uch of modern medicine rests on a reductionist, physicalist approach" which eliminates "the social, moral and personal, everything except the physical, in order to lay bare the inner workings of nature". In fact the medical sciences have become more and more interested in physical elements, to such an extent that they no longer focus on the humanistic and often disregard patient care, which results in utilitarianism (Whatley 2014:963). This trend then also relates to the idea of terminal illness and, therefore, mortality.

Relating to this study, physicalism is closely related to a certain strand within visual culture. Lister et al (2003:94) argue that physicalism unites technology and visual media as it is perceived by the senses and the physical body. Physicalist theories emphasise the technological artefacts that compose the actual visual images (for example the pixels that make up a photograph), but they also focus on the sensory reception of the body and the physical environment within which visual culture is located (Lister et al 2003:427). In turn, if physicalism emphasises sensory experiences it argues for the sense of vision and the visual realm that also forms a critical part of visual culture. Hentschel (2014) maintains that the physical field of optics plays a crucial role in visual cultural studies, while visual culture has

also been vital in the development of physical sciences. Furthermore, human beings have access to the realm of the physical through scientific picturing (consider for example the microscope or radiology), therefore the tendencies of physicalism are embedded in the broad field of the exploration of visual culture (Nieman 2000:vi).

Based on this relation between the visual and physicalism, visual images can be used to demonstrate the physicalist perspective. Accordingly, I would like to discuss selected artworks from present-day American neuroscientist turned artist, Greg Dunn, who uses microscopic images of the brain as inspiration to create works of art that represent the patterns of neurons (Figures 62-65), as examples of a visual manifestation of physicalism.

Figure 62: Greg Dunn, *Glial Flare*, 2012. Gold, dye on metalised panel, 72 x 36inches. (Dunn 2015a).

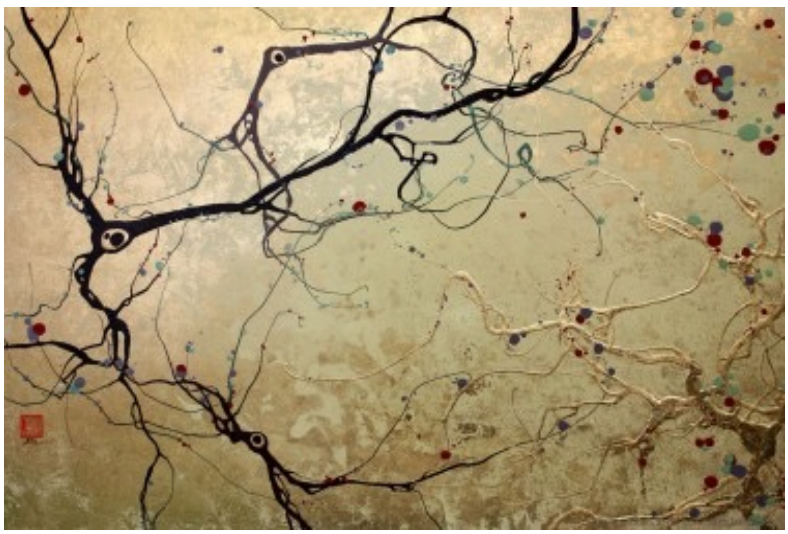

Figure 63: Greg Dunn, *Synaptogenesis*, 2011. Gold, metal powder, mica, and enamel, 36 x 24inches. (Dunn 2015a).

Figure 64: Greg Dunn, *Cortical Columns*, 2014. Gold, ink, dye and mica on aluminised panel, 36 x 48 inches. (Dunn 2015a).

Figure 65: Greg Dunn, *Drosophila Brain*, 2012. Gold, dye and ink on aluminised panel, 18 x 24 inches. (Dunn 2015a).

Dunn uses microscopic images of the brain as inspiration to create works of art that represent the patterns of neurons (Figures 62-65) (Dunn 2015a). To produce these artworks an extensive technological process is followed: Dunn paints all the neurons by hand, he then scans them through a computer and combines them using photo-editing software. From there a high-resolution reflective image is produced, and finally the image is printed onto metal using photolithography (Lewis 2014). This technological process allows Dunn to capture the physical matter at work in the nervous system of the subject (Lewis 2014). This process recalls the works of Fitzpatrick in the *Invisible Light* series, however Dunn's work is placed firmly in the realm of the physical, calling for a physicalist interpretation, in contrast to the animistic analysis of Fitzpatrick's work. The *Invisible Light* series treats seemingly every day technological toys as living entities, evoking the shared soul of the animistic perspective. Distinctly, Dunn studies the scientific, biological and physical realm and, by using technology he captures images that depict the human consciousness, which physicalists accept as the only truth. Taking into consideration the fact that Dunn is a neuroscientist fascinated by the workings of the human body (Dunn 2015a), as well as the subject matter of his work (cognitive processes), his art is placed predominantly within a physicalist outlook.

As discussed, physicalism has a strong connection and relation to the visual domain. Dunn's images are viewed as a direct manifestation of how these two fields collide. By combining art and science Dunn "doggedly seeks links between seemingly unrelated intellectual areas" (Cohen 2014). Dunn (2015b) himself maintains that his "own work can be best described as science/art, not simply because I paint that which scientists study but because I draw evenly

from artistic and scientific approaches". Thus he does not only show the link between science and art, but he also uses artistic methodologies and approaches (such as subjective experiences) to study science and, in turn, scientific processes (description and experimentation). In doing so, he delineates that, in their most basic form, the visual realm and the scientific field are governed by the same fundamental idea, since projects in both fields start with a thought and a question that is then either answered by proving a hypothesis, or answered by interpreting the question through art (Dunn in Frank 2012). McSweeney (2012) argues that Dunn produces both fascinating art and persuasive scientific theories, because both artist and scientist are intent on solving a specific problem, understanding the problem and becoming absorbed by this problem.

The images of neurons depict a physicalist worldview. As mentioned, Dunn examines the biological, in other words the physical, aspects of the body. He depicts the smallest entity in the human brain: the cell in its various minute forms. For example, Figure 65 depicts a cross-section of the motor cortex, a region involved in planning movements, illustrating the prominent layer-V pyramidal neurons (Miller 2013). In addition to studying the cell, the artworks also seem to resemble other aspects of the physical realm such as nature. Often the neurons show similarities between phenomena found in nature, for instance "the dendrite of a neuron looks similar to a tree branch, a crack in the pavement, or a lightning bolt" (Dunn in Shea 2011:31). This occurrence relates to Gunn's primary inspiration, since Asian art is traditionally know to depict trees, plants and nature (Shea 2011:32). Consider *Crepe Myrtle II* (Figure 66) as an illustration. The artwork of neurons looks remarkably like a flower blossoming on branches. In fact, the artist acknowledges this resemblance by naming the work after the Crepe Myrtle plant, a flower tree that takes after a cherry blossom (Figure 67).

Figure 66: Greg Dunn, *Crepe Myrtle II*, 2009. Enamel on composition gold and copper, 24 x 36inches. (Dunn 2015a).

Figure 67: Crepe myrtle flower clusters (Marie 2015).

Another aspect with which these images correspond is the realm of technology is that some of Dunn's images resemble technological and cyber-like structures. In collaboration with fellow neuroscientist Brian Edwards, Dunn created micro etchings that resemble a circuit board and silicon wafer (a substance used in the fabrication of electronics and circuits) as indicated by their titles. There are clear similarities between these images and technological entities. In particular *Cortical Circuitboard* (Figure 68) illustrates this phenomena as it clearly echoes known pictures of a circuit board (Figure 69).

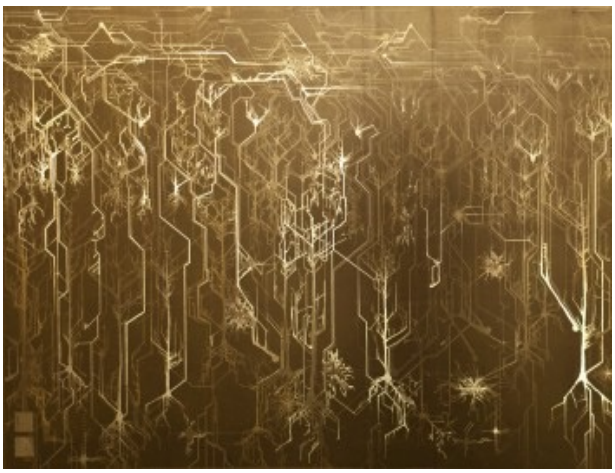

Figure 68: Greg Dunn & Brian Edwards, *Cortical Circuitboard*, 2013. 22K gilded microetching, 24 x 32inches. (Dunn 2015a).

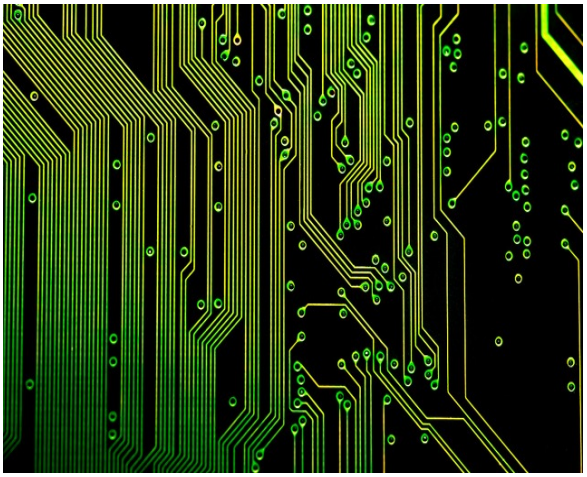

Figure 69: The generally known circuit board (Finley 2012).

This assimilation between the brain and a circuit board is not a recent discovery. Several scientists compare the brain to a computer and other technological devices, as Boyden (in Tucker 2012) maintains "I really like to think of the brain as a computer. Let's take an iPhone - there are millions around the world, they all have the same map but at this moment they are all doing different computations - from firing birds at walls to reading an email. You need more than just a map to understand computation." Acclaimed materialist (Hatfield 2015), Stephen Hawking (in Sample 2011) also makes this comparison, while expressing a physicalist point of view: "I regard the brain as a computer which will stop working when its components fail. There is no heaven or afterlife for broken down computers; that is a fairy story for people afraid of the dark". Hameroff (1998:119) mentions that one of physicalism's basic principles is that the mind and human consciousness can be compared to a computer functioning in the brain's neural networks.

Additionally, the macro world versus the micro world is also strongly present in Dunn's images. The artworks are based on microscopic images of actual neurons, emphasising the

micro world, which physicalism deems as greatly important. The artist and scientist focuses on every single square measurement of each cellular structure that he studies in order to reproduce it and do justice to its design (Hutton 2011). Simultaneously, he is also intent on making visible how the design of these micro cells often repeat themselves throughout the macro world of nature (Hutton 2011). In accordance with the physicalist perspective his artworks demonstrate that everything in the macro world can be traced back to a micro entity. Dunn (in Hutton 2011) explains that he wants the viewer to "connect the dots" between the different scales of immensity, adding that he "wouldn't be surprised if the form were represented on a cosmic level as well. It is a fractal solution to the universe". The image *Hippocampus II* exemplifies these repetitions of the mysterious shapes of nature (Shea 2011), which are repeated on the different scales throughout the entirety of the known world. On a micro level *Hippocampus II* (Figure 70) is Dunn's impression of a cross-section of the hippocampus, a brain region involved in learning and memory (Miller 2013). On a slightly bigger scale (meso), the image's spiral shape is reminiscent of an air photo of land and a river (Figure 71). Finally, on a macro level, the *Hippocampus II* shows similarities to space pictures of spiral galaxies generated by satellites (Figure 72). Thus Dunn's work highlights the different levels of physicalism and their relation, but also reminds the audience of a person's "microscopic" size in comparison to the universe (Shea 2011).

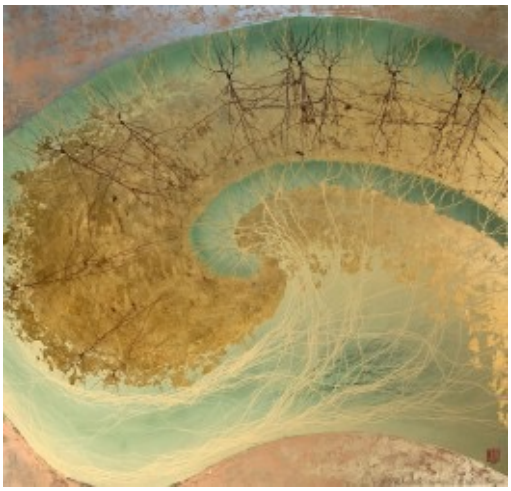

Figure 70: Greg Dunn, *Hippocampus II*, 2010. Enamel on composition gold and aluminum,42 x 42inches. (Dunn 2015a).

Figure 71: Air photo of the Barron river, Cairns. (Ansink & Houba 2012).

Figure 72: AAO image of Spiral Galaxy.
(Bannister 2001).

Lastly, the physicalist component of reason and rationality forms part of Dunn's body of work, as he always attempts to maintain a calm, natural or rational state of mind during the creation of his images (McSweeney 2012; Frank 2012). His work also emphasises the rational versus the irrational as he explains that the neurological structure is "an unfathomable mess on the one hand" but "exquisitely ordered on another" (Dunn in Hutton 2011). Therefore his work depicts the chaotic, incomprehensible, irrational world that simultaneously seems rational, logical and well-reasoned. Dunn compels his viewers to reason and make sense of his images on their own terms. Some viewers argue that these images are beautiful, elegant and inspiring (Miller 2013), while others see something "haunting" comparing the neurons to "saplings waiting for winter" (Hoffmansept 2014). Just as Dunn aims to portray the complexity and simplicity of the physical realm in one image, so the audience must too make sense of the artworks, their significance, relations and meanings.

Through this description of Dunn's artwork it becomes evident that these images of the physiological body exemplify a physicalist point of view. His work focuses solely on the physical matter of the world, highlighting the physical properties of the body, science and technology. Dunn does not allude to a transcending realm, but focuses on an immanent world, based on scientific observations.

4.2 The experiment

Through an analysis of Greg Dunn's images it is evident that physicalism favours technology and the body as physical matter, with a complete disregard for the soul. But how does the disregard for the soul effect humankind? The television film *Wit* (Nichols 2001), based on a play by the same name, poses this question by presenting a narrative which does not romanticise chronic illness, but considers the medical field, technological treatments and physicalist beliefs, as well as how these affect human beings (Knox 2006:234). The film is also described as a "rehearsal" (Knox 2006:234) of the reality of death in the face of technology in a secular society ignorant of the soul.

Wit commences with a close-up shot of a doctor's face telling the audience directly "you have cancer" (Nichols 2001). The camera then zooms out to reveal professor Vivian Bearing talking to a doctor, who confirms that she is diagnosed with stage four ovarian cancer. The doctor, Dr. Kelekian, recommends that she undergoes severe experimental treatments as part of a research study. From this moment on the film affects the viewer personally, as the viewer not only follows, but becomes part of professor Bearing's journey of treatments, until she dies alone in the hospital. Towards the end of the film, she comes to the conclusion that human compassion and contact is more important than intellect, wit and techno-scientific knowledge. Accordingly, the film indicates that a physicalist environment, which favours the pursuit of science and puts human dignity at risk, is predominant.

Human dignity in itself is a heavy-loaded concept, which is closely related to the concept of the soul. Ancient theologians argue that man's dignity is reflected in his resilience and the immortal soul. In turn, Immanuel Kant (in Bostrom 2007:2) states that human dignity is a human value found in all individuals that must be respected by treating a person as an end and not a means to an end. Simplistically, Kant explains that human dignity is maintained if we treat ourselves and others as more than just utilities, or tools (Bostrom 2007:2). Following these definitions of human dignity, Bostrom (2007:3-4) argues that human dignity is a quality and virtue, which places all beings at an equivalent moral and social status of being worthy of respectful treatment. Additionally, political scientist Francis Fukuyama (2002:160) considers human dignity in terms of the current Digital Age and medical ethics, articulating human dignity as: "the idea that there is something unique about the human race that entitles every member of the species to a higher moral status than the rest of the natural world". Considering the theological understanding of human dignity, as well as the above definitions,

the study refers to human dignity as a distinctive value, which precipitates human beings to treat others, as well as themselves with integrity and respect, in an empowering manner. Human dignity is also considered to be a force, or a result, of the soul, because the soul is the exact essence that gives beings the right to be treated with dignity. Thus when it is argued that physicalism jeopardises human dignity, it implies that a part of the soul is also jeopardised.

Wit critically portrays the effects of a physicalist point of view and approach to life.[3] It unequivocally reveals the danger in elevating the realm of the physical above the spiritual and soulful, while warning against the dehumanisation of technology. Throughout *Wit* the physicalist world that Vivian enters during her treatment (the hospital) completely ignores the notion of a soul. This 'world' is then placed alongside other aspects of Vivian's life, outside of the cancer, which recognises a soul and spirit. Therefore, the audience is able to consider the physicalist perspective in broader terms. It is thus not a film portraying a physicalist perspective from which deductions about technology can be made, but is rather a film portraying a physicalist perspective and its glorification of technology threatens human dignity and the soul.

The world of medicine that Vivian faces represents a physicalist worldview. Vivian is hospitalised as an in-patient for eight cycles of full-dose, strong treatments of chemotherapy, which have destructive side effects on the body. Her treatment forms part of a research experiment, which contributes to knowledge creation on cancer and cancer treatments. As seen throughout the film, the three words *research*, *experiment* and *knowledge*, underlie the hospital's attitude to all patients. To them the work, the medical field, the intellect and the science behind cancer are the most important, the person undergoing the treatment is disregarded. Illustrating this Vivian explains to the audience: "the young doctor, like the senior scholar prefers research to humanity. At the same time the senior scholar, in her

[3] Notably, as discussed earlier, the animistic films *her* and *Lars and the Real Girl* portray the sense of treating others and technology with dignity by respecting their beliefs. Similarly, the gnostic film *Never Let Me Go* argues that technological beings should also be treated with a sense of dignity. These two perspectives share a common belief in a soulful existence and therefore argue for the same sense of human dignity. In turn (as it will be affirmed during this chapter) *Wit* conveys that physicalism opposes animism and Gnosticism and lacks a respect for human dignity and the human soul. Thus, as animism and Gnosticism stand in contrast to physicalism; so too does *her*, *Lars and the Real Gir*l and *Never Let Me Go* stand in opposition to *Wit*.

pathetic state as simpering victim wishes the young doctor would take more interest in personal contact".

The fundamental characteristics of physicalism are, therefore, clearly visible in the hospital governed by knowledge, experiment and research. The properties of the physical are signified throughout the hospital in the form of cancer cells, the treatment of the human body, bodily fluids, medications, scientific names, X-rays revealing cells and bone structures, as well as machines. The hospital focuses on physical matter. Emphasis is also placed on the physical deterioration of Vivian's body. In a particular scene, the doctor and his students do a routine check-up on Vivian, matter-of-factly noting all the medical effects of treatment thus far, including "metastases", "lymphatic involvement", "lowering blood cell counts", "nephrotoxicity will be next", "hair loss" and much more. During the scene the only focus is on medical terms, biological manifestation and physical changes. There is no compassion or personal touch shown, the only importance is the physical realm as Vivian explains "I just hold still and look cancerous". The students are even commended on their "excellent command of details", stressing the significance of physical particularities.

The film portrays that in the current Digital Age healthcare is primarily technological (Krueger 2010), since medical machines, medicines and treatments have essentially reshaped medical care. In addition technology in medicine has led to a "paradigm shift" in approaches to patient care (Fennell 2008:1), as seen throughout *Wit*. The constant presence of a telephone, drip, machinery connected to Vivian and wheelchair symbolises the constant presence of technology in the hospital (Figure 73). The constant presence of technology reminds the viewer that the medical treatment causing Vivian's suffering is fundamentally technological. It is also ironic to note that the telephone is always present and yet of no use to Vivian, as she has no friends or family to contact. The telephone has a purely technological presence and is only used by the doctors to call a code when she is dying. Although a telephone is a technology that establishes connection and communication between people (Davis 1998:81-82), in *Wit* it simply emphasises the lack of contact that patients have in the technologically governed hospital. Notably the telephone and wheelchair in the physicalist environment differ significantly from the animistic Samantha and the cellphone in *her,* as well as Bianca's wheelchair in *Lars and the Real Girl.* The animistic point of view depicts

the phone and wheelchair as animated, reliable, personal and comforting, while the physicalist objects in *Wit* are sterile and represent isolation, danger, detachment and decay.

Figure 73: Technologies present throughout *Wit* in the hospital: wheelchair, machines measuring Vivian's vitals and telephone, 2001. Screen shots by the author.

Since physicalism highlights the physicality of the human body, the deterioration of Vivian's physical body becomes the "visual pivot of the film" (Knox 2006:244). Nichols skillfully manifests the suffering of the physical body through technological treatment, employing several close-up shots of Vivian's face and head (Figure 74). As Vivian loses her hair and her face becomes haggard the audience is reminded of iconic faces of suffering, from the survivors of death camps to the tortured and patients undergoing chemotherapy (Knox 2006:244). Vivian's bald androgynous-like head reveals the structure of her skull, symbolising death and evoking sympathy from the viewer. Paradoxically, it is not the physical pain that Vivian undergoes that is the most difficult, but rather the de-humanising and lack of human dignity that comes with the treatment and lack of kindness and respect shown by the doctors.

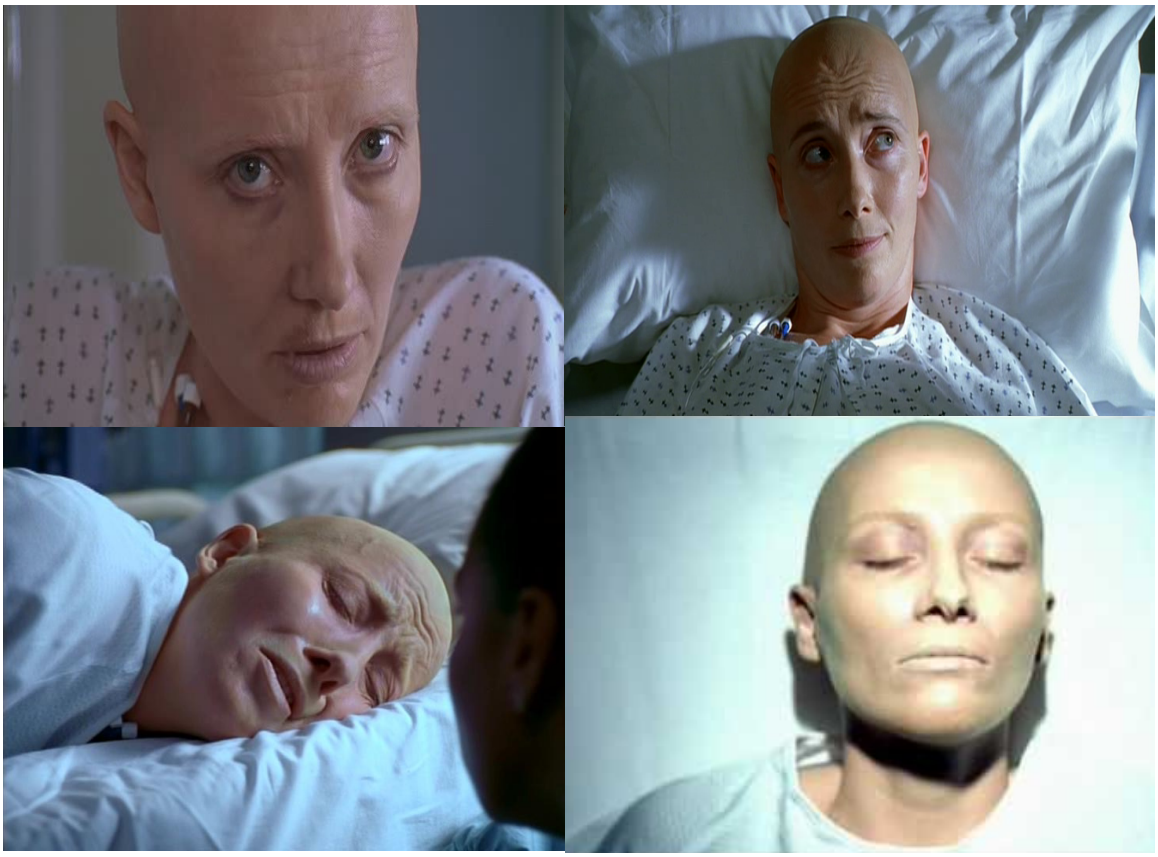

Figure 74: Close-up shots of Emma Thompson as Vivian Bearing in *Wit* focusing attention on her head and bodily deterioration, 2001. Screen shots by the author.

Another aspect of physicalism evident in the hospital environment is the presence of the macro world, often reduced down to the micro world. As an established and recognised literary professor, Vivian is a complete being, however while undergoing treatment she is literally reduced to micro pieces. She is merely seen as cancerous cells, vitals, lab counts, chemotherapeutic agents, bodily systems and a tumour. She is reduced from the macro world to the micro world by the medical profession. It is exactly this reduction that Kant argues should be avoided if human dignity is to be kept in tact. Thus, the reduction to micro entities, results in the diminishing of Vivian's humanity and dignity:

> Kelekian and Jason are simply delighted. I think they see celebrity status for themselves, upon the appearance of the journal article they will no doubt write about me. But I flatter myself. The article will not be about me, it will be about my ovaries. It will be about my peritoneal cavity. Which despite their best intentions, is now crawling with cancer. What we have come to think of as me is, in fact, just the specimen jar. Just the dust jacket. Just the white piece of paper that bears the little black marks (Nichols 2001).

In the hospital the doctors' main goal is to gather research from Vivian, which highlights the trend of rationality and reason within physicalism. The doctors want to extend their

knowledge and enquire through experimentation to find a solution or cure, and explain the phenomena in a simple manner. Paradoxically, this obsession with reason, logic and the search for knowledge leads the doctors to behave in a completely dehumanised manner, as they forget to consider the patient as a human and person. In a particularly traumatic scene at the end of the film, Jason (the resident doctor on Vivian's case) checks-up on Vivian, who is already dead. However, he only notices this after doing a couple of checks. He is so caught up in the study, that he then continues to resuscitate her (in an extremely humiliating manner), even though she signed an agreement to not resuscitate. When questioned about his actions, he argues that "she's research" (Nichols 2001) thereby highlighting his unreasonable preoccupation with the pursuit of reason.

Throughout *Wit* the physicalist fields of neuroscience, medical sciences, illness and disease are prominent. Vivian is terminally ill, as revealed at the beginning of the film, her deterioration is visually portrayed throughout the film in graphical manner. She is placed under intense medical treatment and therefore finds herself in the midst of a physicalist world. As mentioned, modern medicine, which follows a physicalist approach, disregards the personal in exchange for the physical (Whatley 2014:962). This disregard grows to such an extent that in Vivian's case, patient care is dismissed (Whatley 2014:963). Vivian does not receive patient care that is considerate, caring or even humane. She is treated as an object. During her diagnosis the audience is already made aware that the doctors do not intend to treat her as a person with dignity. She is left lying down with her feet in stirrups, exposed to the hospital by a resident (an old student of hers), who shows no sign of empathy or sympathy towards her situation. After the exam she remarks: "that was hard (…) yes, having a former student give me a pelvic exam was thoroughly degrading. And I use the term deliberately (…) I could not have imagined the depths of humiliation" (Nichols 2001).

Naturally then the notion of mortality is also prominent throughout the physicalist worldview presented in *Wit*. Hospitals have traditionally been known as spaces of death and fear, even though their main goal is to ironically save lives (Laderman 2003:94). In addition, dying in a hospital room replaces the transcendence of death with technology and innovation, as Laderman (2003:4) explains:

> A clinical gaze emanating from an assortment of doctors redefined the existential status of the dying individual into one that emphasi[s]ed the triumphs of science and diminished the spiritual needs of the patient. The dominance of a medico-scientific framework for monitoring, interpreting, and

> responding to signs of death transformed the (…) process of dying, and replaced the human family drama surrounding the deathbed (…) with a professional performance at the hospital bedside that depended on equanimity, rationality and detached commitment to saving the life of the dying patient.

The technological and physicalist nature of the hospital has transformed the process of dying and the concept of mortality into a detached practice. In particular this idea of physicalist death is clearly illustrated in Vivian's passing at the end of the film. Her body is brutally pounded by emergency staff, her naked body exposed and rolled around. When the doctors leave, realising they are not able to save her, she is left, as a dead corpse lying alone in her hospital bed with no human dignity. She is completely degraded, dehumanised and detached from the world (Figure 75). This act brings a new meaning to the word *mort*ified.

Figure 75: Vivian dead on her hospital bed, *Wit*, 2001. Screen shots by the author.

Furthermore the tone of death is intensified throughout the film with the recital of the sonnet *Death be not proud* (1633) by English poet John Donne (1572-1631). The sonnet too presents a physicalist perspective of death as the meaning of the poem is revealed in the film. Donne argues that death "is no longer something to act out on a stage with exclamation marks. It is a comma. A pause". It is just a simple act that separates life from death with "no insuperable barriers" (Nichols 2001). The poem then foreshadows Vivian's death as a simple, unembellished, everyday happening in the hospital. Knox (2006:245) describes this as medicalised death, or death controlled by medical technologies.

It is thus exposed that the hospital and treatment that Vivian undergoes represent a physicalist outlook, focusing on the physical body and disregarding the humane. Nevertheless *Wit* does not simply present a physicalist world to its audience and leaves them to negotiate the

consequences of such a world on their own, instead it also gives the viewer a clear message. The film shows how an approach to life governed by technology and the physicalism undermines the soul. It warns that if technoscience continues on this path it could turn human beings into objects, stripping them of their dignity. Vivian's soul and human dignity are taken away by the technology and pursuit for research of the medical profession (Knox 2006:248). Notably it is still not these technologies that kill Vivian, her death remains the result of her incurable cancer. Thus it cannot be argued that the film views technology as killing machines, but rather as entities able to damage or wound the soul. In this manner, the film reminds the audience that in the pursuit of technological development, human kindness and the human soul must not be forgotten.[4]

Fortunately, *Wit* presents a small sense of hope to the audience. The character of nurse Susie treats Vivian with respect and gentleness: she keeps Vivian company, brings her ice lollies, explains procedures to her and tries to remind the doctors that she is just a person. Susie brings a sense of relief to the maltreatment, however this relief is short-lived as she (and the viewer) is constantly reminded that she is powerless in the struggle against the institution motivated by technology and research. For example, Jason asks her "what do they teach you at nursing school?", while a coding medic shouts at her "who the hell are you?" indicating that these doctors regard their job as more important than hers. Hope is also conveyed when professor Ashford (Vivian's former professor) visits Vivian in the hospital. In this particular scene she gives Vivian the touch of human kindness that she so desperately needs, reading her the story of the Runaway Bunny. As the professor explains, the story of the bunny who tries to run away from its mother is "a little allegory of the soul. Wherever it hides, God will

[4] This warning and depiction of medical care is reminiscent of Michel Foucault's *The Birth of the Clinic* (1963) written in view of the Enlightenment shift towards empiricism. In this seminal work Foucault (1963:xiv) comments on the influence of empirical observation in the medical field. He introduces what he refers to as "*the medical gaze"* (Foucault 1963:9) which is the act of looking of a doctor, onto the human body of his patient. Through observing and examining the patient's body as well as by conducting tests (and in the current Digital Age technological experiments) the doctor is able to gain information about a patient's physiological condition. Foucault (1963:xiv) maintains that this medical gaze allows for an open discussion about any body, which removes the transcendental, supernatural properties of the body and leaves the individual open and vulnerable. Furthermore, applying a medical gaze to a body and discussing it in terms of medical terminology objectifies the body and places the doctor in a position of power (1963:89). *Wit* clearly illustrates Foucault's theory within the Digital Age as it shows how subjecting the body of a patient to strict empirically-based research objectifies the patient's body and leaves the patient (Vivian) fragile and vulnerable subject to the gaze of the medical practitioner. Vivian's body becomes a mere object of research to medical science.

find it" (Nichols 2001). Accordingly, the story gives the audience hope that no matter how far technology and science evades the human soul, the realm of the transcendent and humaneness may still be present. This hope is, however, also quickly terminated as the harsh scene of Vivian's so-called medicalised death follows directly after, re-establishing the power of unchecked physicalism.

4.3 Unravelling physicalism

Considering the above visual examples, the characteristics of a physicalist point of view become evident. Physicalism's preference for immanence and soullessness can potentially be harmful to human beings as it may lead to a disregard for human dignity and emphasise an objectification of the body. As discussed in Chapter 1, the nature of this study inherently implies the author's subjective belief in the existence of the soul. It is thus from this horizon that I wish to now speculate whether or not such a physicalist point of view has validity, especially in terms of the relationship between technology and the soul. In order to do so I mainly refer to science historian William Carroll's recent essay critiquing physicalism: *Does a biologist need a soul?* (2015), as well as the film *Transcendence* (2014). In addition the discussion also mentions Hans-Georg Gadamer's major philosophical work *Truth and Method* (1960) and Nancy Murphy's contemporary notion of non-reductive physicalism.

In cinematographer Wally Pfister's directorial debut *Transcendence* (2014), the character of Dr. Will Caster, a devoted scientist (and arguably physicalist) working on the nature of consciousness and artificial intelligence aims to create a self-governing computer which will generate technological singularity. In the film, however, Caster prefers to label this future as "transcendence" instead of singularity. To refer to the future point of singularity as an existence and experience beyond the normal or physical world seems logical, as this is what the singularity itself implies, but it also instantly attaches the notion of the absolute divine or spiritual transcendent to the physicalist notion of a technological future. Therefore, by describing the technological singularity as transcendent, it leaves the audience contemplating the actuality of the soul and spiritual in an immanent technological world. In the film Caster asserts that his idea of transcendence will answer questions such as "is there a soul?" and "where does it reside?" (Pfister 2014). Thus *Transcendence*, as a visual example, echoes Carroll's question by enquiring: *does a physicalist need a soul?*

Transcendence is about Caster and his wife Evelyn, both AI researchers, working on an autonomous computer that replicates the processes of the human mind. After their projects are made public knowledge, Will is shot by a member of an extremist group: Revolutionary Independence From Technology (RIFT). The RIFT group targets several AI researchers, as they strongly believe that technology has the power to annihilate the human race. Will recovers from the shot wound, however, it is discovered that the bullet contained radiation poisoning and he is deemed terminally ill. Before he dies, Evelyn alongside their colleague and close friend Max, upload Will's 'mind' into a computer system to generate him into a transhumanist form. Evelyn then connects Uploaded Will to the Internet, which allows him to become increasingly powerful, and he eventually builds an empire to dominate the world.[5] As Uploaded Will's power increases, Evelyn becomes suspicious about his intentions, fearing alongside the government and RIFT that he may destroy the world. Convinced that Uploaded Will is no longer the Will she knew, Evelyn helps the government to persuade him to accept a computer virus designed to destroy him. Tragically they both die, as Uploaded Will is destroyed and the Internet and technology is wiped out all over the world. It is also revealed at the end of the film that Uploaded Will only had honourable intentions and tried to save and "change the world" for the better.

It can be argued that Will's true intentions could not be understood, because they were irreducible to the scientific realm. Will tried to save the world because of his love for Evelyn, yet this love could not be encoded or described by technoscience and therefore the characters in the film (who follow a physicalist worldview) could not recognise it. If the physicalists acknowledged that "there was something more" (Pfister 2014) to Uploaded Will's existence, perhaps they could have prevented the tragic ending. Only towards the end of the film does Max acknowledge that the physical realm requires space to allow for concepts such as true intentions, love and moreover the soul, as not all of reality is reducible to technoscientific observations:

> I spent my life trying to reduce the brain to a series of electrical impulses. I failed. Human emotion, it can contain illogical conflict. Can love someone, and yet hate the things that they've done. Machine [science] can't reconcile that (Pfister 2014).

[5] Following Baum (2014) the name "Uploaded Will" is used to differentiate between the pre-uploaded, purely biologically, human Will and the transhumanist Will.

As a result perhaps the narrative of the film argues that physicalism needs to recognise the possibility of the soul. Carroll (2015) and Gadamer (1960) support this critique of physicalism, while their arguments are also exemplified throughout *Transcendence*. What follows is a discussion of Carroll's argument in relation to the film, underpinned by the reasonings of Gadamer, as well as a brief outline of Murphy's non-reductive physicalism - a technoscientific perspective which acknowledges the soul.

Carroll (2015:18) explains that new developments in the natural sciences have led to an attempt to eliminate the distinction between living and nonliving entities, which in turn leads to advocating perceptions such as vitalism and physicalism. Pfister's film exemplifies the physicalist point of view since the scientists and environment of the film also reduce the living to physical matter. During the first five minutes of the film the viewer is confronted with several images that prompt the feeling of performing the act of looking through a microscope. These images instantly establish the scientific world and physical environment as all-important. Additionally, the entire film is based on the principle of the possibility of uploading the mind and brain to a technological system. Therefore, for these scientists in the film the totality of being is reducible to the neurological composition of cognitive matter - the main characters do not believe in a transcendental realm and explain everything by referring to the physical. As scientists they also do not distinguish between the nonliving and living.

Carroll (2015:18) contests the above-mentioned physicalist outlook, arguing that "the world in which we live cannot simply be described as a great spectrum of matter". For Carroll (2015:22) the rejection of the soul is a "naive" perception, which implies the rejection of distinguishing characteristics of living entities, in other words a rejection of life. He explains that physicalism produces a limited account of the world, as properties of living do arise from the material, but the totality of what emerges is irreducible to the material elements (Carroll 2015:22). Using Woese's metaphor Carroll (2015:21) explains "biology could read the notes in the score, but it could not hear the music". In similar fashion, Gadamer, (1960) argues against positivism (a fundamental basis of physicalism). He maintains that truth (or for the purpose of this study the meaningfulness of life) cannot be established by a specific scientific criterion, because truth stems from an engagement with various events. Thus, for Gadamer the scope of science is too limited to explain notions of truth, such as the soul.

In *Transcendence*, Carroll's argument—that the denial of the soul is ignorant—and Gadamer's critique on positivism, is exemplified. In the film the scientists reduce the living to physical properties. Will and Uploaded Will are reduced to a physical matter, transferred to a computer. The consciousness in Will is deduced to his terminally ill biological body and the consciousness in Uploaded Will is described in terms of coding, processors, wiring of the computer and the internet. Yet, as mentioned, it is in this reduction that the scientists encounter their confusion, as they cannot see the totality of Will's being and do not understand his intentions; as Carroll puts it, "they could not hear the music". The scientists' "naive" outlook is emphasised throughout the film with the main question used to determine whether something is autonomous or sentient: "can you prove that you're self-aware?". This question is posed to PINN (Will's research-based computer structured on human neurological networks) as well as Uploaded Will and the answer is always the same: "that's a difficult question (…) can you prove that you are" as Max explains "you can't programme a machine to be self-aware, because we have no idea how our own consciousness works" (Pfister 2014). The scientists themselves acknowledge that there are limitations to a perspective, which only makes assumptions based on empirical evidence, since they do not know how to answer questions about that which cannot be empirically observed. This demonstrates Carroll's (2015:20, emphasis added) line of reasoning as he claims: "theories and techniques of modern science [physicalism] provide no space, as it were, for immaterial principles in the explanation of nature. To ask for empirical confirmation of what, in principle, is not subject to empirical observation *makes no sense*". In turn the film then also emphasises Gadamer's (1960:103) notion that meaningfulness is irreducible to natural science.

Additionally, Carroll (2015:24) denounces physicalism for its comparison of living things to the matter of complex machines. There is merit to the comparison between man and machine, namely that both the machine and the living body have different parts that function together in a specific order and these parts work together to perform a higher function. However, it can be argued that living organisms are irreducible to machines, since that which determines a living organism stems and is governed from within, while that which governs a machine occurs from without and can often change (Carroll 2015:25). The physical realm throughout *Transcendence* is deemed comparable (sometimes even superior) to the biological component. Although Will bases his invention upon biological brain structures, he fails to acknowledge the importance of the physical body. In fact, he dismisses the body for its physical limitations and mortality: "once online, a sentient machine will quickly overcome

the limits of biology" (Pfister 2014). In turn, Evelyn also disregards Will's body and tries to overcome his biological deterioration through the means of technology: "Will's body is dying but his mind is a pattern of electrical signals. We can upload his consciousness. We can save him" (Pfister 2014). Thus, at first, *Transcendence* maintains that the biological can be overcome or replaced by technology. This comparability is clearly manifested in the projected images shown during the conference on AI that Will, Evelyn and Max attend to talk about their research. In the clip playing behind Evelyn during her speech, the motherboard of a computer is assimilated to the birds-eye-view of a natural landscape (Figure 76). This image shows that from a physicalist perspective, technology is equivalent to the physical, or the natural.

Figure 76: Part of the clip of images projected behind Evelyn during her speech at the conference, a motherboard of a computer is zoomed out to reveal a air photo of a natural landscape. *Transcendence,* 2014. Screen shots by the author.

Following this equalisation of the body to technology at the start of the film, *Transcendence*, similar to Carroll's (2015) theory, affirms that this comparison is not viable. As mentioned, Carroll (2015) argues that man is irreducible to technology, because a human being's power and autonomy comes from within, while technology has to gain power and autonomy from outside sources. Corroborating this point of view, Gadamer (1960:203) also maintains that the power of humanity comes from its "inwardness". Carroll and Gadamer's argument for inner autonomy is depicted in the film, as Uploaded Will can only gain power from the outside. He needs Evelyn's assistance to gain power and can only function while he is connected to the Internet. The film therefore shows that technology is governed from the outside. It is then also because he is governed by outside sources that Uploaded Will can be destroyed by a virus uploaded to his external sources of power. Finally, at the end of the film all of technology is destroyed and seems useless to humanity, while nature remains as the only thing on which humans can rely. This is conveyed by the aftermath scene that shows everyday life without technology: a keyboard is used as a door stop, a traffic light is no longer working and a cellphone is lying in the dirt. Thus the emphasis then shifts back towards the inner workings of living things, as a blooming sunflower is shown (Figure 77).

Figure 77: A sunflower blooming at the end of *Transcendence*, highlighting the inner essence of living entities.
Screen shots by the author.

Finally, Carroll maintains that the soul does not have to be reduced to science and technology, since these are irreducible to one another. Just because physicalists do not require a soul in their body of work, it does not imply that the soul does not exist. Carroll (2015:30) maintains:

> To speak of the soul of a living thing allows us to begin to understand the difference between life and non life and to understand the way in which a living substance is one thing and not a kind of atomistic conglomeration of distinct parts. It is a unity that is an essential prerequisite for any living organism's being what it is, possessing that characteristics, properties and capacities that it has, and thus acting in the ways that it does. In short, without a soul, there is no living thing and no science of biology - and, of course, no biologist.

Dr. Will Caster chooses to name the technological singularity—when machines are able to replace and overcome the human body—"Transcendence". Following Carroll (2015) and Gadamer's (1960) argument, and Will's choice of words, I contend that he too acknowledges (as a physicalist) that there is a realm beyond the secular, a realm beyond what his scientific theory can explain. Thus the film depicts that even the physicalists needs a soul, proving that in a Digital Age where there exists a relationship between technology and the soul, a disregard for the soul is problematic and lacks validity. In turn, ultimately the film acknowledges the soul, despite the physicalist environment it portrays, when Joseph remembers Will: "We lost a great mind, a great soul, but the spirit of this man will continue to inspire us". Even physicalists cannot explain some things without using the notion of the soul or transcendence.

Supporting the critique against physicalism, a specific branch of physicalism has recently developed to incorporate the concept of the soul. Non-reductive physicalism is based on a monistic point of view and argues that everything stems from the material, which has emerging properties such as consciousness and the soul, which, in turn, have an influence on the material (Carroll 2015:24). Thus non-reductive physicalism argues that the soul and mind are emerging properties of the intricate structures of the brain, nervous system and body (Gray 2010:644). Non-reductive physicalists acknowledge the existence of a soul within (and inseparable) from the human body. These physicalists do not deny soul, it is merely their description of the soul that differs from other worldly perspectives: the soul is described as a development from the complexities of the brain, the mind, the nervous system and the physical body. Hence, according to non-reductive physicalism, the soul is physical as well as

mortal, and not a separate supernatural, non-secular being that resides within entities (Post 1998:195). In this sense, non-reductive physicalism opposes dualism. Barrajón (2004:459) describes non-reductive physicalism as a stance that "defend(s) us as being bodies, but do not deny superior capacities like rationality, emotivity, morality, freedom and the possibility of a relationship with God".

Nonetheless, non-reductive physicalism has also received much scrutiny and critique, since it is argued that any commitment to physicalism reduces the psychological to the physical (Gray 2010:645). For instance, philosopher Jaegwon Kim (1998:1) argues that "if reductive physicalism no longer remains an option, then why not accept that the mind simply has no place amidst the causal workings of the physical world?" In turn Derek Jeffreys (2004:205) remarks that non-reductive physicalism has a restricted idea of causality and tends to ignore the metaphysics of causality.[6] Owing to these critiques non-reductive physicalism cannot simply be accepted as a replacement to overcome the identified shortcomings of physicalism. With regard to *Transcendence*, it can only be speculated whether or not a non-reductive physicalist outlook would have changed the outcome of the film. From my point of view, I contend that if Evelyn did not deny the irreducibility of the soul, she would have recognised sooner that Uploaded Will and Will were not reducible to one another, preventing the actual creation of an unstoppable technology.

***

To conclude, this chapter has critically considered the physicalist perspective on technology and the soul. Stemming from positivism and empiricism the popular worldview of physicalism expresses the need of human beings to always have faith in empirical evidence. Opposing dualism and monism, physicalism argues for a soulless and immanent existence. This view is illustrated in Greg Dunn's neuron artworks that focus on the micro physical aspects of the physical body and natural environment. Dunn shows that the micro physical realm often resembles technological processes with his own technological methods in the creation of his work. The neuron imagery exemplifies that a physicalist outlook denies the existence of a soul, in favour of technological matter.

[6] Also refer to *The soul in theology: critical reflections on non-reductive physicalism* (Barrajón 2004), *Non-reductive physicalism and the mind problem* (Schneider 2011), as well as *The Conceptual Link from Physical to Mental* (Kirk 2013).

Even though physicalism seems simple enough to follow: ignore the soul and the transcendent and focus on what is physically viable - it does hold certain complications. As shown in the television film *Wit*, such a worldview could lead to the objectification of the body by technoscience, a lack of human dignity and a disregard for others. It is therefore important to question whether or not such a relation between technology and the soul, in which the one dominates the other, is valid. Following Carroll (2015) (supported by Gadamer [1960]) and through an examination of the film *Transcendence,* it becomes clear that the physical realm and the soul cannot be reduced to one another, since they cannot be said to consist of the same substance. There are certain aspects of human existence that science cannot (yet?) be explained and, therefore, perhaps a transcendental realm is needed. This is proven in *Transcendence* which shows a pro-physicalist environment that acknowledges the notion and need for the soul.

Transcendence and *Wit,* in turn, both depict the consequences of an overwhelming physicalist world. The films, one set in the future and one set in the present, pose several important questions about the relation between technology and the soul in a world dominated by physicalism. In these two films the two protagonists become terminally ill and both die. What becomes evident, is that a physicalist perspective presents a much more threatening tone of the relationship between technology and the soul than animism's optimistic point of view. The physicalist point of view forgoes the soul in favour of technoscience, for a serious price: human dignity.

CHAPTER FIVE
SOUL FAR SOUL GOOD: CONCLUSION

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namasté
[nah-mas-tay]

my soul honours your soul.
I honour the place in you where
the entire universe resides
I honour the light, love, truth,
beauty & peace within you,
because it is also within me
In sharing these things
we are united, we are the same,
we are one

Throughout this study the contemporary relationship between the concepts of the soul and technology has been critically analysed by referring to the manner in which the relationship is represented in visual culture, most notably film, photography and artworks. Using a framework of three different categories to understand the soul, provided by psychiatrist Alison Gray (2010), the relation between the soul and technology was explored. These three categories included monism, as it manifests in an animistic approach, dualism, as it manifests in a gnostic approach, as well as a physicalist approach. The exploration of these three approaches to the soul revealed that an increasingly complex relation occurs between technology and the soul, which impacts our current society. The categories revealed similarities and differences in their outlook on technology and the soul, therefore the hermeneutic interpretation of the various visual examples differed and overlapped accordingly. The enquiry aimed to 'soul-search' within the Digital Age and, through the analysis of these three categories and their associated visual examples, found the soul alive and well in an intertwined, irreducible relationship with technology.

5.1 Summary of chapters

The first chapter of this study identified the necessity for an enquiry into the relationship between technology and the soul by revealing the current omission in literature of this theme, as well as by illustrating how, in a digitally driven society, technology has become interlinked with several aspects of personhood, including the soul. Chapter 1 also indicated a strong convergence between the realms of technology, the soul and the visual, motivating the

relevance of studying this relationship in association with visual culture. Additionally, the concepts of the soul and technology were classified and defined, along with a clear outline of Gray's (2010) three main categories of approaches towards the soul. The discussion revealed that this research study, following philosopher Martin Heidegger, understands technology as a process or action that develops and enframes human life, contending that it surpasses an instrumentalist view of technology. In turn, the soul is understood to be the basic essence of life with various faculties that serve as the interaction between the humane and the absolute. Finally Gray's three approaches to the soul revealed that animism (monism) maintains that the lifeless has life, spirit and soul, and thus gives characteristics of living things to inanimate things and events. Gnosticism (dualism) involves an approach of being based on various religious beliefs and principles and finally, physicalism asserts that there is nothing more to the world that what can be scientifically and empirically observed. By discussing these categories, parameters could be identified for the relationship between technology and the soul associated with each of Gray's approaches. These parameters are the notion of a soulful existence versus a soulless existence, as well as the transcendent versus the immanent. Each of Gray's categories manifests a relationship between technology and the soul guided by these parameters.

The first association between these parameters is a belief in a **soulful** existence with an **openness to transcendence** as manifested by the monistic perspective of **animism**. Chapter 2 focused on the relationship between technology and the soul from such a monistic point of view as it manifests in animism. Through the analysis of the animistic visual examples *her, Invisible Light* and *Lars and the Real Girl* it was evident that the animistic approach argues that technology can contain a soul, which can connect to the transcendental realm. This animistic soul within technology proves to show a playful, positive and caring nature, which adds hopeful prospects for a society embedded in technology.

The discussion regarding the dualistic approach of Gnosticism in Chapter 3 revealed an extension of this discussion on 'evil pursuits' in the relationship between technology and the soul. Since Gnosticism argues for a clear distinction between the body and the soul as separate entities, as well as a great divide between the evil matter of the world and the divine realm, its understanding of the relationship between technology and the soul is also classified within these dualities. The analysis of the visual examples *Gravity*, *Crash*, *Never Let Me Go*, and selected artworks by artist Aleksandra Mir revealed that a gnostic relationship between

technology and the soul argues that both technology and the soul exist in a **soulful** and **transcendent** realm. The nature of this relationship between technology and the soul is two-fold: firstly, technology can become a means or an aid in the journey of the gnostic soul, enabling the soul in its journey to escape from the evil towards the good and transcendental; or secondly, technology can form part of the evil world and destroy the soul, leading to alienation and entrapment.

Finally, in Chapter 4 a physicalist point of view was considered to analyse the relationship between technology and the soul. This point of view argues that in the relationship between technology and the soul, technology is the only true variable, because existence is **soulless** and **immanent**. Through a description of the artworks by Greg Dunn, such an existence with emphasis on physical matter and empirical evidence was illustrated. Arguing from the subjective position of the belief in soulful beings, the physicalist perspective on the soul and technology was assessed. An analysis of the film *Wit* indicated that a denial of the soul in the relationship between technology and the soul is harmful to mankind, since it objectifies the human body and removes a sense of humanity amongst people. In turn, the theory posited by Carroll (2015) and through an analysis of the film *Transcendence*, it becomes evident that physicalists need a soul to explain that which cannot be explained by physical matter.

5.2 Contribution of the study

This dissertation has provided a diverse variety of perspectives on the complicated relationship between technology and the soul, through the interpretation of various visual examples. Throughout the research conducted for this study, literature concerning the relationship between technology and the soul especially in relation to visual culture appeared to be exceedingly limited. The exploration has accordingly aided the expansion of research on ontological matters and philosophical enquiry in terms of visual culture. It has addressed a limitation in the current existing literature on this topic, but has also contributed to the establishment of visual culture within a broader set of subjects, such as philosophical matters. Therefore the study has aided in lending a different and new perspective to the analysis and understanding of notions of being, especially in relation to visual culture studies.

The study also developed a new continuum of parameters for the analytical reasoning of the relationship between technology and the soul and provided detailed explanations of contested notions, such as technology, the soul, posthumanism and cyborgs in the Digital Age. Thus the

study developed a manner of thinking about this subject matter relevant to current society and contemporary life. Additionally, I also offered critiques on popular perspectives, such as physicalism, based on visual representations.

The main contribution of this study has been to demonstrate that a relationship exists between technology and the soul and depending on the specific approach to being, this relation can have a significant impact on mankind and contemporary society. For instance, the relation can provide playful and humbling encounters, be misused to extend harmful aspirations or it can aid in the search towards transcendence. In turn, when out of balance it can also lead to disconnection and malevolence. I do not wish to argue for a preference to a specific approach to technology and the soul; I hope that this study supplies enough information for the reader to consider the various perspectives as a whole and apply it accordingly in the everyday technologically-infused world.

5.3 Limitations of the study

The dissertation has mainly focused on a discursive level and literature study, instead of attempting to practically measure the relationship between technology and the soul. Thus the limitations of this study are such that the research remains theoretical and speculative. Moreover, an interpretation of visual representations cannot always substitute and adequately account for an understanding of actual situations and therefore the study remains subjective and limited to the realm of visual culture.

Another limitation of the study is that it prioritises selected visual examples and three specific approaches to the soul. Several other ontological perspectives of being exist outside of this dissertation's framework, which would provide a different interpretation of the relationship between technology and the soul. In turn, a wide variety of visual representations of the soul in relation to technology can be found that are not analysed in this study. Although this framework and restrictions allow for a concise and manageable research process, it does admittedly provide a limited perspective on heavy-loaded notions, while also sometimes over-simplifying immensely complex concepts. Finally, the subjective position and nature of this study bounds the research to a belief in the soul and, to a certain extent, compromises a quintessential objective investigation.

5.4 Suggestions for further research

Based on the research conducted in this research study many complementary studies can be carried out, whether in terms of visual studies or the discourse of philosophy. Based on the identified limitations, a study encompassing a broader view and other approaches to the soul and technology can be conducted. Similarly, a study incorporating different visual representations could also be considered. An investigation comparing older visual examples, such as *The Matrix*, to the more contemporary examples used could also garner interesting results. However, such an academic endeavour requires research of a greater scale than the scope of this dissertation allowed.

The methodological approach of this study could also be applied to investigate the relationship between technology and other properties of personhood. For example a similar enquiry can be made into the relationship between technology and the spirit, technology and the body or technology and consciousness. In addition, the parameters identified throughout this study can be built into a research study of its own, as the transcendental, immanent, soulful and soulless aspects of technology can be explored separate from Gray's (2010) three categories. Additionally, since gender is only explicity discussed in the chapter on Gnosticism, future research can include a discussion and analysis of race, gender and class in terms of technology and the soul.

Another suggestion for further research that stems from this research study is an investigation into the effects of technology on the soul. This dissertation has proven that not only does technology and the soul impact society, but technology also impacts the soul significantly and *vice versa*. Therefore, a study examining technology and the soul as separate entities, rather than as a unit, can also prove valuable.

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This dissertation has 'soul-searched' through the Digital Age and visual culture to explore the relationship between technology and the soul. The conclusion of the study is that different perspectives of the world reveal a different interpretation of this relationship and that these perspectives can have positive, as well as negative effects on current society. Various visual examples representing this relationship revealed these perspectives and provided insight into the current world. As mentioned, I do not advocate for or against a specific perspective, but I do wish to deduce the following from my research:

1) There exists a clear relationship between technology and the soul in our current world, which is of critical importance and should not be ignored.

2) If this relationship is simultaneously considered from an animistic, gnostic and physicalist perspective, it can be concluded that technology can either contain the soul, aid the soul, detach the soul or deny the soul of its dignity.

3) Thus, for the time being, mankind still has the power to choose and negate which one of the above options it prefers to believe in and apply to everyday existence. However, all these perspectives have a commonality in that they argue for a respect for the soul in human beings (physicalism) and the possible soul of technology (animism, Gnosticism).

4) If we do not keep having such discussions about this relationship, we might possibly soon only be able to discuss the properties of an utopian/dystopian idea of a 'technosoul', where a clear distinction between the two entities no longer exist.

I would like to conclude my 'soul searching' by extensively referring to theorist Davis (2015:355):

> [t]he fact that technology has already cataly[s]ed so much soul-searching suggests how mischievous and sprightly a role it plays in the mutual unfolding of ourselves in the world (…) We blame technologies for things that arise from our social structures and skewed priorities; we expect magic satisfactions from machines that they simply cannot provide; and we remain consistently hoodwinked by their unintended consequences. Technologies have their own increasingly alien agenda, and human concerns will survive and prosper only when we learn to treat them, not as slaves or simple extensions of ourselves, but as unknown constructs with whom we must make creative alliances and wary pacts. This is particularly the case with information machines. Whatever social [animistic], ecological [physicalistic] or spiritual [gnostic] renewal we might hope for in the new century, it will blossom in the context of communicating technologies that already grid the earth with intelligence and virtual light. Prometheus is hell-bent in the cockpit, but Hermes has snuck into Mission Control, and the matrix is ablaze with entangling tongues.

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