NEW MEDIA ART: IMMERSION AND THE SACRIFICE OF THE BODY

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ABSTRACT

New technologies, such as virtual reality, often draw to itself myths from other fields of interest and discourses. One such myth that has attached itself to virtual reality is the notion that virtual reality can provide a utopia for the mind, or true self, if the body can be cast off. It is this discarding of the body that my thesis aims to investigate in terms of Girardian sacrifice.

Girard's notion of sacrifice is built upon the observation of various cultures throughout history. It stands to reason that in our contemporary, digitally influenced, society, sacrifice, in some form, still persists. I argue that the body, when viewed as disposable, through the use of virtual reality, exhibits the same traits as the selected sacrificial victim.

As the myth of a utopia for the mind, or true self, exists prior to the advent of virtual reality, traces of it, as well as the sacrifice I argue it entails, can be found in other texts as well. One such a text is *The Chrysalids* (Wyndham 1955). This text presents the reader with characters which I argue represent both the mind and body separately. *The Chrysalids* culminates in the characters representing the mind leaving for a utopian city whilst the character who, I argue, is most strongly associated with the body, Sophie Wender, is killed.

It is also argued here in that the notion of abandoning the body is simply a myth since the inability to abandon the body is also discussed in terms of phenomenology, pointing out that the body can ultimately not be completely removed from the making of meaning. This phenomenological acknowledgement of the body, along with a critique *The Chrysalids* and cyber-utopia's view of the body, forms the basis of my practical body of work.

KEY TERMS

Abject   That which is cast off from the body

Cartesian dualism   René Descartes's notion that the body and mind are of separate substances

Cyberspace   The representation of data within a system of computers

Cyber-utopian myth   The myth that the mind can enter into an ideal, digital, world in cyberspace

Immersion   The level of investment a user feels in a virtual environment. This is also dependent on their level of interaction with a simulated environment

Mimetic desire   René Girard's notion that desire has an external origin and that this origin lies in mimicking the desires of others

Monstrous   To be composite, liminal and boundary defying

New media art   Art that makes use of new technologies, such as virtual reality, cyberspace or other digital practices

Phenomenology   A philosophical discourse which focuses on the experiencing of phenomena in the world

Sacrifice   The killing or expulsion of a selected victim to purge the community of violence

The Chrysalids   A science fiction novel written by John Wyndham in 1955 concerning telepaths, mutants and blindly following doctrines

The four stereotypes of persecution   The events leading up to a sacrifice as put forward by René Girard

Virtual reality   An environment that is generated by a computer and allows for user interaction in some way

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CHAPTER 1: INTRODUCTION

1.1. Background

In our contemporary Information Age, one can discern a noteworthy relationship existing between myths and technology. The invention of new technologies runs parallel with the creation of new myths as well as the appropriation of older myths. Karim (2001:114), Professor of journalism at Carleton University in Canada, explains that new technologies are essentially promoted through myth as it provides a framework of familiar meaning. Virtual reality and cyberspace are supreme examples of technologies, which were imbued with mythic significance upon their emergence in the 80s and 90s.

Cyberspace and virtual reality can be understood as the nexus for many myths because, as Doctor Imar de Vries (2012:16) from the University of Utrecht explains, technologies that are perceived as particularly transformative become attached to more myths. Most of the myths that centre on cyberspace and virtual reality however share a common element, which is an underlying notion of utopianism.[1]

The utopian element connected to cyberspace and virtual reality concerns the presentation of a digital utopia which is attainable.[2] The illusion of a cyber-utopia concerns the notion that through immersion and virtual reality the mind can be separated from the body to live in a perfect, digital, world (Bernard 2000:26).[3]

In the work at hand, immersion is discussed in its significant relation to virtual reality, which provides access to such a digital utopia (Featherstone 1995:610). According to the Canadian scholar Diane Gromala (1996:598), the user becomes immersed in a world of digital information by way of the internet, computer simulations or digital art installations. Immersion is often viewed from a Cartesian perspective, which regards the body as separate from the mind (Cook 2004:1). The Cartesian conception of embodiment, used in relation to immersion, leads to the notion that the body should be abandoned as it is deemed to be useless flesh in the face of an accessible cyber-utopia as is described by the Cyprus-born, Melbourne raised, performance artist Stelarc (1998:562).

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[1] A close relationship between utopia, and by implication dystopia (Nakamori 2012:33), and technology has always existed. This is despite the fact that the archetypal machine, which is described by Mumford (1966:17), concerns human being's conquest of nature, traditionally associated with utopia. Technological advances in the last century have moved at an incredible pace, bringing with it utopian ideas coupled with a strong sense of hope for the future as is described as early as 1966 by Sears (1966:138).

[2] The word *utopia* implies both a good place (*eutopia*) and a no-place (*outopia*), it then follows that it is a place that is outside space and out of reach (Robins 1996:77).

[3] Expressed in this way, the discourse of immersion is closely linked to escapism (Chen, Gau & Wu 2013:45). However, this study is mainly concerned with embodiment and does not focus on escapism.

Through the body being presented as that which should be abandoned, certain links can be made between the abandoned body and the scapegoat, or sacrificial victim, as formulated by the contemporary French literary critic, René Girard's (1986:24) theories of sacrifice. Sacrifice is explained by René Girard (1972:79) as the ultimate resolution to strife or conflict. He is of the opinion that a scapegoat mechanism is usually employed, which leads to sacrifice. In this study I argue that this sacrifice, in terms of immersion, virtual reality and embodiment, is represented by the myth of cyber-utopia which aims to abandon the body (Cook 2004:1).When embodiment is conceived of as dualistic, it can be argued that the body falls victim to stereotypes of persecution, which culminate in the sacrifice of the selected victim.

For this dissertation Maurice Merleau-Ponty's phenomenological[4] account of embodiment is considered in order to counter the notion of embodiment as dualistic, and thus vulnerable to full physical abandonment during immersion into cyber-space (Rey 2012:[sp]). Merleau-Ponty, in opposition to Cartesian dualism, does not view embodiment as dichotomous or dualistic in the traditional sense (Atkins 2005:102). Through utilising and applying Merleau-Ponty's phenomenological[5] approach (Atkins 2005:102), the focus shifts towards the embodiment of the participant as opposed to their disembodiment. From this follows the argument that full immersion, which is argued here as having the ultimate goal of abandoning the body (Rey 2012:[sp]), cannot be accomplished.

Contemporary new media artworks also make use of cyberspace and virtual reality, which implies that these artworks are bound by the discourses surrounding cyberspace and virtual reality. The cyber utopian myth as it concerns immersion, embodiment and sacrifice are thus relevant when new media artworks like Mariko Mori's *Wave UFO*[6] (1999-2005)[7] (Figure 1, 6-9, 14 & 16-18), as well as

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[4] Phenomenology can be understood as the study of phenomena concerning the experience one has of phenomena and thus the subjective understanding of phenomena (Smith 2013:[sp]). Experiences of individuals within their 'life-world' takes precedence in the study of phenomenology. Understanding phenomena through consciousness is addressed by phenomenology as it takes as starting point that all ideas and structures through which humans make meaning of the world, originated in the world to begin with (Smith 2013:[sp]). Intentionality, the notion that consciousness draws from the world and is directed towards the world, also concerns the idea that a subject is embodied in the world (Smith 2013:[sp]). Experience's intentionality is seen within the study of phenomenology as stemming from conscious experience within the world (Smith 2013:[sp).

[5] Phenomenology and hermeneutics are viewed as interlinked. A phenomenological method, when taken to be interpretative may become hermeneutical (van Manen 2011:[sp]). Phenomenology relies on the subjective and thus interpretative nature of reality. Phenomenology, when used in conjunction with hermeneutics, aims to consider the world through the subjective individual's experiences (Kafle 2011:186). For this study, phenomenology is used and described in greater detail. Although hermeneutics is mentioned as a research method, it is not further discussed in this dissertation, but taken to be implied in the method of phenomenological discussion that follows.

[6] A documentation of this artwork can be viewed on YouTube, *Wave UFO a Venezia: Reazioni*, which was posted by Antonella Coppola in 2007. His video is unfortunately not in English, thus, for an English video, refer to *Mariko Mori- Oneness- Wave Ufo*, Dan Steinberg, posted in 2011.

[7] *Wave UFO* (Mori 1999-2005) was in production from 1999-2002 (Kerr 2015:[sp]) in a Turin automobile factory (Kunsthaus Bregenz [sa]:[sp]). In 2003 it was on exhibition in New York at The Public Art Fund

Minnette Vári's *Chimera*[8] (2001) (Figure 2, 3, 15 & 20-22) and Rafael Lozano-Hemmer's *Under Scan*[9] (2005-2008) (Figure 4, 10-12 & 19) are considered.

Figure 1: Mariko Mori, *Wave UFO*. 1999-2005. Fiberglas, Technogel, Acrylic, Carbon fibre, Aluminium, Magnesium and Digital media, 4.93 x11.34 x 5.28 m. Madison Avenue, New York. (Telemaque Time 2007:[sp]).

Figure 2: Minnette Vári, *Chimera (White Edition).* 2001. Digital media, Variable. (Arthrob 2013:[sp]).

(Kunsthaus Bregenz [sa]:[sp]). *Wave UFO* (Mori 1999-2005) was open for public interaction in 2005's Venice Biennale (Kunsthaus Bregenz [sa]:[sp]).

[8] Minnette Vári's website, minnettevari.co.za, contains documentary footage of both her black and white editions of *Chimera* (2001).

[9] A video documentation of this work can be viewed on YouTube under *Underscan*, posted by Nathalie Hambro in 2008.

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Figure 3: Minnette Vári, *Chimera (Black Edition).* 2001. Digital media, Variable. (Arthrob 2013:[sp]).

Figure 4: Rafael Lozano-Hemmer, *Under Scan*. 2005-2008. Digital media, Variable. (Wall Street Journal 2009:[sp]).

Furthermore, other texts, which do not necessarily make use of virtual reality or cyberspace, can also be connected to the concept of a disembodied cyber-utopia as it concerns immersion, embodiment and sacrifice. John Wyndham's *The Chrysalids* (1955), a classic science fiction novel, is argued as containing a narrative which overlaps with the relevant elements of a cyber-utopia. Particular

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emphasis is placed on the character of Sophie Wender, relating to her embodiment. An example of a cover from *The Chrysalids* (Wyndham 1955) can be seen below.
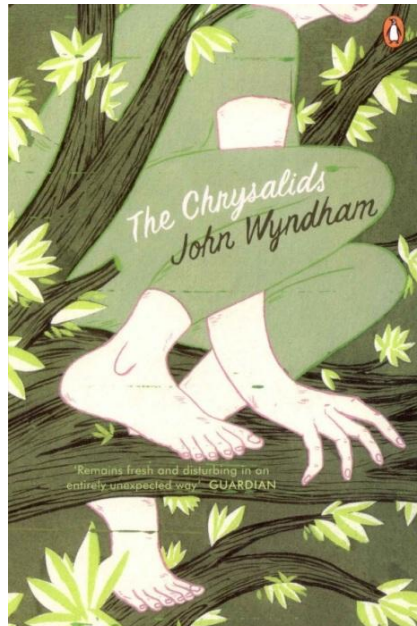
Figure 5: Brian Cronin, *The Chrysalids* Cover, 2008. (Goodreads 2015:[sp]).

In order to better understand how the abovementioned works of art, as well as *The Chrysalids* by Wyndham (1955), either exemplify or circumvent the myth of a cyber-utopia and the abandonment of the body as it relates to sacrifice, a deeper understanding of the relevant concepts are necessary. Since cyber-utopianism concerns virtual reality, cyberspace and immersion, these concepts are defined and discussed here. The definition of these concepts helps demonstrate the relevance of my use of *The Chrysalids* (Wyndham 1955) and the selected new media artworks.

Cyberspace[10] in contemporary society is represented by all computer-mediated-communication, which can be defined as data gathered within a system of computers (Chohan 2012:8). According to the contemporary American philosopher Michael Heim (1993:80), virtual reality is a part of cyberspace because it makes use of cyberspace. Peter J. Taylor (1997:172), Professor at the University of Loughborough, states that virtual reality consists of three components: a simulated world, a system through which access or immersion is allowed to this world, and the user's real time interactions with this world. Virtual reality, as a technological application, is set apart from other technological applications through its primary concern with interactivity, but also with the immersion of a user into a virtual environment (Bailenson, Patel, Nielsen, Bajscy, Jung & Kurillo 2008:355).

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[10] The term *cyberspace*, was coined by William Gibson in his novel *Neuromancer*, published in 1984 (Heim 2003:140).

Immersion, according to Heim (1998:7), involves a user's interaction with a virtual world, the quality of which depends on the isolation of specific senses from the real world through technological devices. The interface is the main medium through which a user can interact with a virtual world in cyberspace.

An interface is generated when information sources, such as a human and a computer are confronted with one another (Heim 1993:76). The interface is the main input point between the embodied user and computer, allowing the user access to cyberspace (Grau 2003:10).

The interface allows for immersion, but since it is also an object it points back towards the user's embodiment and inability to become completely immersed in a virtual utopian world (Murray and Sixsmith 1999:324). However, an interface does create a malleability of the boundary between virtual space and the body since the interface exists between a body and a virtual space as is discussed by Professor of Film and Media Studies at Stanford University, Scott Bukatman, which is reviewed by the polish scholar Wojciech H. Kalaga (2010:16). There is an intention to further this malleability by increasing the invisibility of the interface so that a more total immersion through interactivity may occur (Ishii and Ulmer 1997:4).

Total immersion is thus inextricably linked to our experience of reality, be it real or virtual. However, the user is to be secluded from the real world, including his or her body, which is substituted by a virtual world and/or simulated body (Nuhn 2006:68). In virtual reality, virtual bodies can thus be created for users to inhabit (Williams 2001:126). These simulated bodies do not die or age, but remain immortal as opposed to the dying, physical body (Wertheim 1999:257). The real body of the user becomes a hindrance to the immersion of the participant owing to its physicality as well as its mortality (Stelarc 1998:562). This is particularly relevant when considering new media art.

New media art uses digital technologies (Paul 2002:47) such as virtual reality and cyberspace for artistic expression (Tribe & Jana 2006:6). According to American scholars Kocur and Leung (2005:3) new media art is a new, technological art practice which predominantly addresses the contemporary shifts in human consciousness. New media art is of specific relevance to this study as it possesses qualities which no longer centre on the real, but on a simulation which detaches an observer from the real and aims to immerse them in a parallel, simulated world (Lenoir 2004:xiv).

The work of Lozano-Hemmer, *Under Scan* (2005-2008) (Figure 4, 10-12 & 19), may be viewed as new media art or digital art because it is interactive (Mateas & Stern 2005:[sp]), makes use of new technologies and contains elements that are digital. Mariko Mori's *Wave UFO* (1999-2005) (Figure 1, 6-9, 14 & 16-18) and Minnette Vári's *Chimera* (2001) (Figure 2, 3, 15 & 20-22), may be considered new media art owing to the fact that these artworks are cinematic and digital (Manovich 2001:67).

Mariko Mori's *Wave UFO* (1999-2005) is also particularly concerned with immersion (McMullen 2003:33).

Since new media art may contain elements of immersion and virtual reality, it can also be related to the cyber-utopian myths attached to these technologies which reveal the fact that the Cartesian notion of the mind/body split is still present in contemporary society (Ajana 2004:1). This is because of the frequent encounters human beings have with new technologies, as well as Enlightenment's grand narratives connected to the possibilities they offer (Ajana 2004:1).[11] Utopian narratives concerning cyberspace and virtual reality feed into Enlightenment thinking as they emphasise reason above the irrational (Coyne 1999:45).

One such narrative that is prevalent in contemporary society, and centred on progress through technology and reason, is the notion that through virtual reality and cyberspace, immortality and utopia is attainable (Wertheim 1999:40). This is, however, an effort which focuses on the immortality of the *mind* as well as a virtual utopian space free of the physical body.

Thomas Foster (1999:144), author of *The Rhetoric of Cyberspace: Ideology or Utopia?,* identifies the appeal of cyber-utopia by explaining that through becoming immersed in a virtual world, or cyberspace, participants are met with various choices of pleasures without the inhibiting factors of their bodies being prevalent. The physical body is seen as not playing a significant part in cyberspace. Cyberspace is viewed as being a space where the oppressed of the real world can express themselves and experience freedom from the social norms which inhibit them (Sheilds 1996:9). Those who enter virtual reality or cyberspace through immersion achieve an invisibility of their bodies. Immersed subjects leave behind factors that are perceived as inhibiting them in real life such as race, class, age and sex (Haraway 2000:297). The real, troublesome, body is perceived as left behind (Cavarallo 2000:75).[12]

The ultimate goal of virtual reality and immersion is thus the realization of what Ajana (2004:1) refers to as "the Cartesian dream". This implies an enacted dichotomous splitting of the body and mind; a physical actualisation of Cartesian dualistic metaphysics (Ajana 2004:1). It then follows that by conceptualising embodiment in accordance with Cartesian dualism that theories pertaining to cyberspace, virtual reality and immersion can consider the body as obsolete and disposable.

A new media artwork which is especially concerned with immersion into a utopian space for the mind is Mariko Mori's *Wave UFO* (1999-2005). Mariko Mori (1967) is a contemporary, female, Japanese

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[11] Grand narratives or metanarratives are terms that can be used almost interchangeably and were first used by Jean-Francois Lyotard (New World Encyclopedia 2014:[sp]). Grand narratives are concerned with a totalizing view of reality and often try to give an account of reality that can be equated with a universal truth (New World Encyclopedia 2014:[sp]).

[12] See also: Taylor (1997:179), Lupton (2000:479) and Balsamo (1996:128).

born, New York based, artist, whose art often concerns the plausible creations of the future (Kozka 2010:28). Mori's visions of the future are influenced by science fiction, but are usually philosophically orientated and based on the notion that all life forms are connected (Ippolito 2009:422). The future worlds created by Mori are synthetic realities, simulated worlds that have their own consciousness and reality (Wallis 2008:5). The fusion of consciousness and technology is also a concept that is of interest to Mori (Kozka 2010:28).

Mori's *Wave UFO* (1999-2005) is a large, teardrop shaped sculptural structure (Figure 1, 6 & 17) which allows participants to view their brainwaves as well as an animation titled, *Connected World* (Mori 1999-2005) (Pinchuk Art Centre 2012:3) (Figure 7, 8 & 16). *Wave UFO* (Mori 1999-2005) is concerned with creating a sense of immersion and is also utopian in nature (Kozka 2010:26). *Wave UFO* (Mori 1999-2005) is discussed mainly in relation to cyber-utopianism and the place she gives the body in her artwork.

It should be noted that not all new media artworks are solely concerned with immersion. In fact, emphasis is often placed contrariwise on the participant as embodied. This implies that the new media artworks which do not focus on disembodiment provide a reading of embodiment that is alternative to Cartesian dualism. Such artworks are usually phenomenological in nature. Phenomenology focuses on the body as the only way in which to make meaning of the lived world (Lupton 2000:479). New media artists that are relevant to this study due to their focus on the body are Rafael Lozano-Hemmer and Minnette Vári.

Rafael Lozano-Hemmer (2013:[sp]) is a Mexican based artist whose interactive artworks incorporate robotics, surveillance equipment as well as telematics networks. According to his personal webpage *Lozano-Hemmer* (2013:[sp]), he uses these appliances to create interactions between a virtual world and the real world. In *Under Scan* (2005-2008) (Figure 4, 10-12 & 19) he aims to involve the body in a virtual space through making the artwork interactive (Levin 2005:462-482). This interactivity is achieved through *Under Scan*'s (2005-2008) installed surveillance equipment which is used in order to project video portraits into the shadows of passers-by with which participant scan then interact (Lozano-Hemmer 2013:[sp]).

Ravetto-Biagioli (2010:121-140), who analyses much of Lozano-Hemmer's work, states that the body's physicality is thus shown though Lozano-Hemmer's artwork to be relevant to the virtual. Lozano-Hemmer's *Under Scan* (2005-2008), like his other *Relational Architecture* artworks, of which *Under Scan* (2005-2008) is the 11th, focuses on the physical body's individuality, something that disembodiment through immersion into cyberspace wishes to erase (Shanken 2000: 64-77). Other contemporary new media artists, however, also focus on the body.

A South African based contemporary artist who also uses digital media and is thus relevant in terms of embodiment and virtual reality is Minnette Vári. Vári inserts her own body into her artworks, as can be seen in *Chimera* (2001) (Figure 2, 3, 15 & 20-22). In this video installation piece the artist's body is included in the video that is projected in the Voortrekker Monument, and shows her body morphing with a marble frieze (Stutzer2008:13).The video installation is animated and has multiple channels (Stutzer 2008:21).*Chimera* (2001) renders the same narrative in both black (Figure 3, 15 & 21) and white (Figure 2), both including Vári's body (Stutzer 2008:21).

Through inserting her own body into such narratives and spaces, Vári aims to draw attention to subjective, individual memories and suffering, which are entwined with the body (McFadden 2005:2). Vári thus draws attention to the body and the nature of embodiment by employing a medium that would traditionally be considered immersive, but by doing so in a manner which subverts the dualistic view of immersion.

The Chrysalids (1955), however, does not subvert a dualistic manner of thinking. Wyndham's publication, although not being a new media artwork or directly concerned with immersive technologies, can however be discussed as containing utopian ideals that are concerned with disembodiment. In this study I argue that Wyndham's text has bearing on a Cartesian conception of virtual reality, as well as the abandonment of the body for a superior, mind-centred place.

The post-apocalyptic narrative in *The Chrysalids* exemplifies the struggle between the mind and body in a closed religious community (McLeaish 2012:4). Physicality, through mutation, is often displayed as being a hindrance to the continuation of life as such individuals are removed from the community and sent to the Fringes (Zubrycki 2004:268). Sacrifice and embodiment, from a Cartesian perspective, are exemplified in the novel. It is argued that this is exemplified through Sophie, who may be viewed as representative of embodiment, as opposed to the other telepathic, mind-centred, characters in the novel (Stemp 2004:[sp]). Sophie is exiled and killed in order for the main, telepathic, characters to gain freedom.

I argue that Sophie's death, which is discussed as a sacrifice, in relation to the telepathic characters, may be read as an analogy for the dichotomy between body and mind. This is linked to a cyber-utopia where the body of Sophie, needs to be abandoned, in order for the telepathic characters to become immersed in a space that is centred on the mind and the virtual. In *The Chrysalids* immersion into the virtual is represented by the mind-link created by the telepathic characters as well as the ultimate society of telepaths (Wyndham 1955:200). In my research I also consider *The Chrysalids* from a

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phenomenological approach, focusing on Sophie as an embodied subject to explore sacrifice and embodiment as well as create art.[13]

As aforementioned, this study thus considers new media artworks, specifically *Wave UFO* (Mori 1999-2005), Vári's *Chimera* (2001) and Lozano-Hemmer's *Under Scan* (2005-2008) as well as *The Chrysalids* (Wyndham 1955) in relation to cyber-utopianism. Cyber-utopianism can be considered as underpinned by Cartesian dualism and present in cases that aim for full immersion (Rey 2012:[sp]). *Wave UFO* (Mori 1999-2005) can be considered as having utopian underpinnings as Mori focuses on connecting participants through immersion (Kozka 2010:26). Similarly *The Chrysalids* (Wyndham 1955) can be connected to cyber-utopianism as it depicts characters who are mind-centred and body-centred, the focus falling on the superiority of the mind. An alternative reading to virtual reality and cyber space can be provided by artworks that focus on the body instead of the mind. This is evident through Rafael Lozano-Hemmer's *Under Scan* (2005-2008), which uses the body as part of the artwork (Ravetto-Biagioli 2010:121-140), as well as Minnette Vári's *Chimera* (2001) where the artist focuses on her own body (Stutzer 2008:21).

1.2. Problem statement

The physical body is viewed as a cumbersome boundary which disrupts immersion into the utopian virtual world (Featherstone 2000:610). This virtual world is closely linked to utopian ideas and is also described as utopian (Robins (1996:77). An embodied user cannot however become fully immersed in a parallel, simulated, utopian world (Bartlett & Byers 2003:33). In accordance with these views, the body is hence regarded as synonymous with an obstacle, or prison, one which virtual reality strives to overcome (Wertheim 1999:257).[14]

Virtual reality and immersion and the notion of embodiment is thus viewed in terms of Cartesian dualism (Underwood 2015:30). This suggests that immersion into cyberspace is only possible through splitting the mind and body (Murray & Sixsmith 1999:138). The first argument proposed in this study follows the philosophical anthropologist Girard's notion of sacrifice and stereotypes of violence which attempts to show that through immersion into an utopian virtual world there is an endeavour to sacrifice the body. However, this cyber-utopian vision ultimately reveals itself to be a myth. Contrary to the dualistic view of immersion, phenomenologists argue that the physical body cannot be wholly sacrificed or abandoned. The second part of the argument in this study therefore attempts to show

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[13] My body of practical work, *The Body of Sophie* (2015-2016), is discussed at length in the exhibition catalogue which forms part of this MA submission.
[14] The body as out-dated is also incorporated into the notions of post-humanism. Post-humanism posits that the current physical form of humans is a dead-end and that the body can only be part of further evolution if it is reinforced by technologies such as genetic engineering, cognitive science, neural computer integration and molecular technology (Terranova 1996:273).

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along phenomenological lines that embodiment is central to any interactive experience with the virtual.

The artworks and text discussed above are used to demonstrate the points made in these philosophical arguments. Focus is placed on the themes of embodiment, immersion and sacrifice in the selected artworks and text. *Wave UFO* (Mori 1999-2005) is discussed predominantly in chapter two in terms of the body's inactivity allowing for the mind's immersion into a purposefully created virtual utopian space. The deliberate exclusion of the body in this artwork is discussed in terms of sacrifice and its contribution to a more complete immersion.

Lozano-Hemmer's *Under Scan* (2005-2008) and Vári's *Chimera* (2001) are considered in phenomenological terms emphasising the *inclusion* of the body into the virtual, which is discussed in chapter three. The role of the body as a 'sacrifice' in favour of the cyber-utopian ideal of disembodied immersion is thus undermined in these works through the body's deliberate inclusion, expounding the impossibility of the total sacrifice of the body, and revealing the mythic nature of the cyber-utopian vision.

Through use of *The Chrysalids* (Wyndham 1955) I aim to illustrate that sacrifice based on Cartesian dualism contributes to the ideal vision propagated by a mind-centred utopia. The character of Sophie is given special emphasis, both theoretically in this dissertation as well as practically in my accompanying body of work, which is discussed in the presented exhibition catalogue. Focus is placed on Sophie in order to better illustrate the problematic nature of sacrifice in favour of an utopian ideal. This same problematic logic is identifiable in the discourses on cyber-utopianism, in which the attempt is made to forfeit the body for the sake of increased immersion into the virtual.

1.3. Aims and objectives

Surrender of the body is investigated through the theories of René Girard concerning mimetic desire and scapegoating with particular emphasis on the four stereotypes of persecution (Rettie 2005:16), which is elaborated on in Section 1.4 of this chapter. In this regard I investigate the notions of embodiment and immersion as they are viewed through the discourse of cyberspace as utopian. I argue that the Cartesian notions of embodiment underpinning cyber-utopian thought, portrays the body in terms of sacrifice. I then argue that, from a phenomenological approach, the cyber-utopian myth, which places the body as expendable is unattainable.

Embodiment as it is portrayed by the myth of a cyber-utopia is explored in conjunction with Cartesian dualism. In order to investigate other notions of embodiment, the phenomenological approach taken by Merleau-Ponty is considered and posited as an alternative to the Cartesian model (Coole 2007:179). The body as sacrifice as per Girard's four stereotypes of persecution pertains appositely to

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the conceptualisation of the body in cyber-utopian and Cartesian thought, as well as to Phenomenology and the way it removes the body from the position of sacrifice.

Artworks including Mariko Mori's *Wave UFO* (1999-2005) (Figure 1, 6-9, 14 & 16-18), Minnette Vári's *Chimera* (2001) (Figure 2, 3, 15 & 20-22), as well as the work of Rafael Lozano-Hemmer, *Under Scan* (2005-2008) (Figure 4, 10-12 & 19), are referred to in order to demonstrate the notions investigated in this study as mentioned above. Mori's *Wave UFO* (1999-2005) is primarily explored in relation to Cartesian dualism and cyber-utopianism, although a phenomenological approach is also applied. Minnette Vári's *Chimera* (2001) and Rafael Lozano-Hemmer, *Under Scan* (2005-2008) are investigated from a phenomenological approach relating to virtual reality and immersion. The above mentioned artworks are all analysed concerning embodiment and sacrifice.

This study's findings are applied to a body of artworks which is represented as the culmination of my MA Fine Arts degree. *The Body of Sophie* (Le Roux 2015-2016) is my final body of practical work. The exhibition catalogue's contents, which discusses *The Body of Sophie* (Le Roux 2015-2016), extrapolates on the theory discussed in the thesis at hand by presenting the viewer with a narrative, based loosely on the events surrounding the character of Sophie in *The Chrysalids* (Wyndham 1955).

1.4. Theoretical framework

This study uses as its theoretical framework Cartesian dualism, phenomenology and the concept of sacrifice, with particular reference to the four stereotypes of persecution as put forward by Girard. These theories are used in the discussion of immersion as it concerns the body as well as the cyber-utopian myth of abandoning the body. The mentioned theories allow for the identification of the cyber-utopian myth in the selected new media artworks and *The Chrysalids* (Wyndham 1955). Furthermore the selected theories allow for an assessment of the cyber-utopian myth as it concerns embodiment in the selected artworks and *The Chrysalids* (Wyndham 1955) as well as a possible undermining of this myth. This study makes use of a literature based practice-led research method.

Cartesian dualism, as posited by seventeenth century French philosopher, René Descartes, which centres on the notion that two distinct metaphysical substances exist. One substance is viewed as the subject, or mind (*res cogitans*), and the other the object, being the physical, objective world (*res extensa*) of embodiment (Murray & Sixsmith 1999:138). The mind, according to Descartes (2003 [1641]:15), is the seat of the self, not the body. A dichotomy is thus formed between the thinking subject and the embodied object, which is argued in this study as being problematic in relation to embodiment and immersion into a cyber-utopia (Bernard 2000:26). There is an exploration of the so called division between mind and body and the problems associated with it. This includes the cyber-utopian myth as it aims to facilitate the relinquishing, or sacrificing, of the body.

Sacrifice can be viewed through Girard's mimetic theories as existing in two types, one being pre-biblical and part of the scapegoat mechanism, and the other concerns self-sacrifice (Wandinger 2010:72). The former functions in such a way that the scapegoat, who is often an innocent individual, who is sacrificed by the community to protect the established order and has in itself no real power (Ward 2000:19). Self-sacrifice entails a desire that is excessive on the behalf of another; it does not always entail scapegoating (Adams & Girard 1993:30).

What is of particular interest to this study is Girard's four stereotypes of persecution. The four stereotypes of persecution is a model provided by Girard (1986:12), which stipulates the conditions for a violent act to qualify as a sacrifice. The first stereotype concerns a loss of difference, the identifying of crimes which threaten established order is the second stereotype, the third stereotype indicates that the victim is selected due to a mark he/she carries and the fourth stereotype is the violence done to the selected victim (St-Pierre & Holmes 2010:[sp]).

The identifying of the sacrificial victim, or scapegoat[15], touches upon the notions of the abject as well as the monstrous. Due to the limited scope of this study neither of these two terms is explored in-depth, but since it is relevant to the four stereotypes of persecution, a short overview is provided in what follows here.

The abject is that which is cast off, in particular here, excreted and cast off by the body (Harrow 2009:58). Abjection is concerned with the act of severance. That which is separated from the self is seen as abject (Boldt-Irons, Federici & Virgulti 2007:xi). Being separated from that which is abject concerns a demarcation that is focused on the exclusion of that which has been expelled from the self and is no longer the self (Linderman 1984:140). The abject is liminal[16] as it is lies on the border of subjecthood, neither completely a subject nor devoid of subjecthood (Powrie 2003:[sp]).

Kristeva (1982:2) explains that the abject disrupts order and crosses boundaries and is in this way threatening. In the crossing of boundaries and its association with the liminal, the abject may also be linked to the monstrous. The monster is usually a composite being, in this way transgressing categories of classification and is associated with the liminal (Punday 2002:803). Through its duplicity in physical form the monster represents chaos and the disruption of social order (Douard

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[15] The 'scapegoat' is a term given to the sacrificial victim by Girard (1986:39). Scapegoating is discussed in greater detail in chapter four: *Sacrifice and The Body in Virtual Reality: The Body as Victim in New Media Art and* The Chrysalids (75-115).

[16] Arnold van Genepp, a Belgian folklorist coined the term, 'liminality' in his book *The Rites of Passage* (1960). Van Genepp (1960:vii) writes that liminality concerns the realization that something has become separated from the self, the liminal here points to being ins state of transition. Liminality is derived from *limen*, which is the Latin word for threshold (Westerveld 2011:3). Liminality can be understood as referring to that which is in an in-between state or even an in-between space (Madge & O'Connor 2005:86) Liminality is associated with ambiguity; it is a state where in transformation is possible (Westerveld 2011:3).

2009:32). Just as the monster disrupts social order, the body is represented in the cyber-utopian myth as disrupting immersion into a virtual utopia.

An alternative to the cyber-utopian view of the body as an object of sacrifice is presented by phenomenology. Sacrifice, or the abandonment of the body, may arguably be avoided if embodiment is viewed in terms which do not centre on Cartesian dualism. Atkins (2005:102) notes that the dichotomy of dualism in Descartes's theory of embodiment is undermined by Maurice Merleau-Ponty.

Meaning, according to Merleau-Ponty (2004 [1948]:10), cannot be separated from being-in-the-world, or embodied experiences one has. This indicates that the body should not be viewed as hampering meaning. Merleau-Ponty's views stand in opposition to the notion of immersion which posits the negation of the body as a means to establish meaning because the body resists and disrupts immersion (Lupton 2000:479). It is through the body that all knowledge and information can be received; meaning is thus generated through the body in this way according to Grosz (1994:87).From this point of view, I argue that the body cannot be sacrificed even through immersion.

This notion, concerning phenomenology's resistance to the aim of sacrificing the body, is explored through the work of Minnette Vári's *Chimera* (2001) because it inserts the artist's body into the artwork (McFadden 2005:2), as well as the work of Rafael Lozano-Hemmer, *Under Scan* (2005-2008) which physically involves the audience's bodies (DeLanda 2000:105).

1.5. Research methodology

A qualitative research method is employed by this study. The theoretical themes of embodiment, immersion, virtual reality, cyber-utopianism, and sacrifice are investigated in relation to the aforementioned selected works of art as well as the dystopian narrative of *The Chrysalids*. A hermeneutical approach is taken when conducting this study. Hans-George Gadamer (2006 [1986]:46), the twentieth century, East German, philosopher (Malpas 2003:[sp]), states that hermeneutics is a theory that is used to bring about understanding or to establish an understanding. For this study Gadamer's notions on hermeneutics are not referred to outright, but rather form an implied base through which to interpret texts, both visual and literary in origin.

Hermeneutics is the theory of understanding in general, which brings together all fields (Pokorný2011:2-3), including those wherein art, embodiment, immersion, virtual reality, cyber-utopianism and the notions of sacrifice are present. To establish an understanding through the combination of various fields a dialogue between the reader and text must occur, each bringing with them their own horizons determined by prejudice and authority (Kinsella 2006:[sp]). When such a dialogue occurs, a new understanding is created as horizons fuse.

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The interpreter, through this new understanding, is exposed to both the text and him/herself, thus their own horizon, authority and prejudices (Shalin 2010:10). In this way a hermeneutical analysis is done through a comparison of the selected artists' works in order to facilitate a new understanding of them as related to the relevant notions as mentioned above.

One of qualitative research's focal points is human experience, and thus it strives to generate an understanding of in-depth experiences (Kruger 2003:19). The meanings of these artworks are thus open to various readings, including my reading of *The Chrysalids* (Wyndham 1955), which is analysed through the aid of a literature study.

This study is done in conjunction with the production of a practical body of work which consists of six stop-motion animated artworks which focus on embodiment, virtual reality, cyber-utopianism as well as sacrifice. The body of practical work is created applying/implementing the method of practice-led research.

Practice-led research is a research model that is proactive as it places emphasis on practitioners within fields of practical studies and work, such as the creation of fine art, who perform research through the actions of creating, as well as reflecting on these creative actions (Nithikul 2007:[sp]). The researcher/artist's topics are still informed by traditional theoretic research within the arts and humanities (Sullivan 2009:47). The methods, through which such topics are explored however, centre on creative production (Creativity & Cognition 2013:[sp]). Practice-led research is often interdisciplinary, because it covers various practical as well as theoretical fields, and is dependent on the practitioner's historical, cultural and social situatedness (Rust, Mottram & Till 2007:10). The theoretical study serves as the starting point of my creative production, as the actions of making and interacting with the various mediums involved in the production of stop-motion animation may alter the course of the final products.

Emphasis is placed in the practical creation of my art based on the theories of immersion, sacrifice as well as embodiment, through narrative. The narrative of my practical work stems from my discussion of Sophie and *The Chrysalids* (Wyndham 1955) within this dissertation which is concerned with sacrifice and disembodiment. The phenomenological theoretical underpinnings of my study, as informed by my theoretical discussion in this dissertation, is explored in practice through the medium of stop-motion, with emphasis on its physical input. Furthermore, phenomenology is considered in my practical work concerning the viewer and their embodiment as non-dualistic. The above mentioned arguments can be found in the exhibition catalogue.

The exhibition catalogue and catalogue essay therein, should be read in conjunction with this study as the mini-dissertation provides a framework for the discussed work in the catalogue. It is also important to note that the practice-led process, although this mini-dissertation informs it and creates a

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basis for it, is only discussed in the exhibition catalogue concerning the production of my own work. This mini-dissertation does thus not seek to be an accurate representation of all the processes that form the creation of a practical body of work. Rather, it only provides one part of the process, namely the theoretical underpinnings, whist the catalogue provides and discusses the rest of the practice-led process concerning my own work.

It follows that the practical component of this dissertation, along with the exhibition catalogue's contents, include all the relevant theories discussed within this study and considers the body of created work as practical representation of the findings and conclusions of this study.

1.6. Seminal sources and literature review

Within this study emphasis is placed on embodiment. The cyber-utopian myth has been indicated as underpinned by Cartesian dualism; it then follows that this approach to embodiment needs to be considered. *Meditations* (2003 [1641]:53-121), a seminal text which greatly influenced Western thought, written by seventeenth century French philosopher René Descartes, concerns embodiment. This is the origin of the notion of Cartesian dualism, which is employed by virtual reality and is present in cyber-utopian thought (Bailey 1996:33).

Although Descartes did not write on virtual reality, owing to his socio-historical context, his ideas have been adopted into the notions of virtual reality and immersion, namely that the mind can exist separately from the body in cyberspace as explained by Bailey (1996:29-50). This is relevant when works of art, such as Mariko Mori's *Wave UFO* (1999-2005) (Figure 1, 6-9, 14 & 16-18), Minnette Vári's *Chimera* (2001) (Figure 2, 3, 15 & 20-22) and Rafael Lozano-Hemmer's *Under Scan* (2005-2008) (Figure 4, 10-12 & 19) make use of virtual reality and an act of immersion by the viewers is requested or sought.

Embodiment is also discussed at length by the twentieth century French phenomenological philosopher Maurice Merleau-Ponty, which is a primary source for this study. Merleau-Ponty (2004 [1948]:1-114) states in *The World of Perception* that, unlike the model for embodiment provided by Descartes in *Meditations* (2003 [1641]:53-121), the body is not an obstacle to the mind as the seat of self, but that the body's physical existence in the world facilitates meaning. The writings of Merleau-Ponty in *The World of Perception* (2004 [1948]) and *Phenomenology of Perception* (2005 [1945]) do not deal directly with virtual reality; however, his notions are viewed as highly relevant to this study as they preclude bodily sacrifice in new media art.

New media art uses notions evident in virtual reality such as immersion and the ultimate abandonment, or aim to sacrifice the body, and is extensively expounded by Grau (2003). This source concerns virtual and digital artworks as presenting extended, virtual space in a gallery (Slayton

2003:xii), as well as interfaces and immersion into a work of art (Grau 2003:3). Grau's work is treated as a secondary source concerning new media art and immersion. Other texts, such as that of Manovich (2001:30-278), pertaining to new media art is also accessed. Hansen's (2004:1-272) *New Philosophy for New media*, which focuses on new media art and the discourses surrounding it, like virtual reality and immersion, is also consulted for this study.

Virtual reality, and the body's place in the processes involved, is discussed by Michael Heim (1993), whose publication is a primary source for this study. In Heim's *The Metaphysics of Virtual reality* (1993) virtual reality is discussed and defined (Heim 1993:3-33). Embodiment and virtual art are discussed by Heim, but he does not refer to sacrifice directly or to phenomenological notions.

The body as a hindrance that should be abandoned and discarded/sacrificed, as discussed by Murray and Sixsmith (1999:315-343), is used in this study as a secondary source concerning immersion. Immersion is explored by Murray and Sixsmith (1999:315-343) particularly in terms of the malleability of bodily boundaries. Stelarc (1998:560-576) discusses the body as being an obsolete object that must be abandoned or enhanced with technology. Wertheim (1999:1-336) discusses the notion of disembodiment through immersion in terms of myth and points out such cyber-utopian notions as mentioned above. Grosz (1994), in opposition to cyber-utopian thought on disembodiment, discusses the body as being central to human existence and experience, which stands opposed to the abandonment of the physical body.

These sources do not discuss the body as sacrifice in terms of virtual reality and immersion, but they do inform the argument that Cartesian dualism and immersion into virtual reality has as its final objective the abandonment of the body, as seen in the writings of Murray and Sixsmith (1999) as well as Stelarc (1998).[17] Grosz (1994) as a secondary source on phenomenology is used to stave the notion that when embodiment is viewed from a phenomenological perspective the body cannot be abandoned.

Even though a phenomenological approach indicates that no separation can be made between the body and mind, the cyber-utopian myth, as a *myth*, still strives towards the abandonment of the body. When the myth is assessed is terms of its contents instead of its real world applications, an argument can be made that the proposed abandonment of the body can be linked to sacrifice.

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[17] It is important to note that most of the seminal literature on cyberspace as utopian originates in the late 80s and 90s along with the immergence of virtual reality. Authors such as Stelarc, Murry and Sixsmith, Featherstone, Robins and Heim along with other authors from that time are thus used in this study as seminal sources. Often secondary sources, presenting an overview or re-interpretation of the above mentioned authors, provide a discussion concerning the problematic aspect of their utopian views (books such as *The Net Delusion* by Evgeny Morozov published in 2011). It is therefore pertinent to reference the seminal text as it maintains utopian ideals and is exemplary of the myth of a cyber-utopia.

Sacrifice is discussed in detail by the contemporary French literary critic René Girard and is used as a primary source in this study. Girard's works, such as *Violence and the Sacred* (1972) deal with ideas centring on mimetic desire[18], which leads to sacrifice. Girard (1972:24) deems sacrifice as a means to end conflict created by mimetic desire. A party is selected, demonised and blamed for the entire community's strife and is thus sacrificed, as explained by Palaver and Borrud (2010:121-137).

These terms of scapegoating and sacrifice which are postulated by Girard are employed in order to determine in what way the body may be viewed as sacrifice in relation to virtual reality, as presented through the previously mentioned new media artworks of the Mariko Mori, Minnette Vári and Rafael Lozano-Hemmer. *The Chrysalids* (Wyndham 1955), although not a new media artwork, is also considered due to its relevance concerning embodiment and sacrifice.

Lozano-Hemmer's *Under Scan* (2005-2008) is primarily discussed by Associate Professor Ravetto-Biagioli (2010:121-140). Ravetto-Biagioli (2010:125) describes not only the specific installation and creation details of *Under Scan* (Lozano-Hemmer 2005-2008), but also gives a detailed description of the interactions of individuals with this piece. Since *Under Scan* (Lozano-Hemmer 2005-2008) is primarily discussed in terms of phenomenology as well as how it subverts the abandonment of the body, this subjective text concerning personal experience is used.

Minnette Vári's *Chimera* (2001) is also discussed in relation to phenomenology and the subversion of leaving the body behind. A detailed description of the artwork as well as the artist's intensions behind the work is given both on Minnette Vári's website (Minnette Vári 2015:[sp]) and her catalogue, *Of Darkness and of Light: a mid-career survey exhibition* (2016). An interview with Vári, by independent writer, curator and editor, Tracy Murinik in *Of Darkness and of Light: a mid-career survey exhibition* (2016:49), details Vári's subjective experiences of the site where *Chimera* (2001) was screened as well as her feeling which prompted the creation of this artwork.

Mori's *Wave UFO* (1999-2005), is discussed in relation to both phenomenology and Cartesian dualism, as well as the body's relation to sacrifice drawn from more than one major source. The Pinchuk Art Centre's catalogue on Mariko Mori, entitled *Mariko Mori Oneness* (2012) gives a detailed description of the artwork and its various technological intricacies. Karen J. Kortbek and Kaj Grønbæk (2008:4), authors of *Communicating Art through Interactive Technology: New Approaches for Interaction Design in Art Museums*, discuss Mori's work in more detail, focusing on Mori's conceptual motivations but also the reactions of participants to her work.

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[18] Mimetic desire is explained by Girard (1972:147) as occurring when individuals imitate each other's desires in a desire to be like the person they are imitating. This concept is further explained in chapter four: *Sacrifice and the Body in Virtual Reality: The Body as Scapegoat in New Media Art and The Chrysalids* (75-115), particularly, 4.2. *The stereotypes of Persecution* (76-81).

The Chrysalids (Wyndham 1955) is integrated into this dissertation to consider embodiment in terms of virtual reality and immersion, especially regarding the abandonment of the body as sacrifice in the face of cyber-utopian thinking. *The Chrysalids* (Wyndham 1955) is discussed my Ashley M. McLeaish as part of her MA dissertation of Arts. McLeaish (2012) makes particular reference to Sophie and her status in the community, which is later discussed in the exhibition catalogue, in terms of sacrifice.

The interpretation of the selected artwork and novel depends on the researcher's reading thereof, in this case, myself. The interpretation in this study is dependent on hermeneutics. The twentieth century philosopher from East Germany, Hans-Georg Gadamer, has highly influenced all consequent thought on hermeneutics, through such works as *The Universality of the Hermeneutical Problem* (1976) and *Truth and Method* (1965) which is used in this study as primary sources. Gadamer (1989 [1965]:198) states that hermeneutics concerns the discourse and method of understanding and interpretation of texts, which is not just a scientific concern, but an integral part of the human experience.[19]

Wilhelm Dilthey (1990 [1964]:102), a German hermeneutical philosopher from the nineteenth and twentieth century, explains in his text *The Rise of Hermeneutics*, that hermeneutic understanding is also concerned with the understanding of oneself and how this understanding aims to be imparted onto another.

Hermeneutics, as explained by Friedrich D, E, Schleiermacher, a nineteenth century German philosopher and theologian, in *The Hermeneutics: Outline of the 1819 Lectures* (1990 [1819]:86), also places emphasis on the bias and socio-historical situatedness of the human subject. Understanding via the hermeneutical method is thus predicated on the context of the author of the text as well as that of the interpretant, which formed their pre-understanding, as Grondin (1995:ix), a contemporary Canadian literary theorist, explains in *Sources of Hermeneutics*.

Hermeneutics is used as a method of understanding in this dissertation in order to better conceive of the goal to sacrifice the body through immersion into virtual reality, viewed both from a Cartesian and phenomenological approach. Hermeneutics also opens up the interpretation of the visual texts included in this study as well as the interpretation of Sophie as sacrifice in *The Chrysalids* (Wyndham 1955). In this manner, Hermeneutics serves as a methodological underpinning for this study.

1.7. Overview of chapters

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[19] Understanding through the method of hermeneutics is thus achieved, according to Van Niekerk (2002: 233), when the horizons of the interpreter, the author and the texts intersect one another. In order for this to occur the interpreter has to be exposed to a form of dialogue with the text or author, where after their pre-conceived notions can be revaluated in order to gain a broader sense of understanding (Bowie 1998:232). Jasper (2004:21) states that understanding, being the main concern of hermeneutics, is non-linear as it moves from ignorance to understanding.

This dissertation forms the framework and theoretical basis for my generated practical work, *The Body of Sophie* (Le Roux 2015-2016). The chapters discussed here each provide a deeper understanding of the relevant concepts and how they interlink. Five chapters make up this dissertation. The exhibition catalogue should be read as a discussion of the relevant concepts within my generated body of practical work.

Firstly the introduction, which is a chapter on its own, defines key terms and sets out the background of the study as well as the goals the study aims to meet. The research methodology as well as the conceptual and theoretical framework of the study is outlined herein. Texts, both visual and literary, from which the study draws are presented and reviewed in a brief literature review. An overview of the visual texts is provided, and these texts are briefly outlined, analysed and compared.

In chapter two an overview of *The Chrysalids* (Wyndham 1955:1-200) is provided. There then follows a discussion of Cartesian dualism as well as how this theory of embodiment is related to cyber-utopian thought, immersion and virtual reality. *Wave UFO* (Mori 1999-2005) is analysed in conjunction with the abovementioned concepts. *The Chrysalids* (Wyndham 1955:1-200), drawing on the discussion of Cartesian dualism and cyber-utopianism, is then discussed in relation to Sophie as presenting the body as opposed to the telepathic characters.

Phenomenology as discussed by Merleau-Ponty is examined in greater detail in chapter three. This is followed by a discussion of how phenomenology relates to immersion and cyber-utopian thinking. Through a discussion of Minnette Vári's *Chimera* (2001) and Lozano-Hemmer's *Under Scan* (2005-2008) phenomenology's inclusion of the body in virtual reality is discussed. From this then follows a discussion of *The Chrysalids* (Wyndham 1955), concerning a phenomenological reading of the Sophie in particular.

Chapter four is concerned with applying the theories of Girard regarding sacrifice to embodiment and immersion in virtual reality as well as *Wave UFO* (Mori 1999-2005), *Chimera* (Vári's 2001), *Under Scan* (Lozano-Hemmer 2005-2008) and *The Chrysalids* (Wyndham 1955). Firstly Girard's four stereotypes of persecution are discussed in greater detail. After this discussion follows the application and discussion of each stereotype to the selected artworks as well as *The Chrysalids* (Wyndham 1955), with focus falling on Sophie, as these texts relate to embodiment, cyber-utopian immersion into virtual reality as well as sacrifice.

The conclusion, which is the sixth and final chapter, includes the findings of the study. The body as sacrifice in terms of immersion into virtual reality from both a Cartesian and phenomenological perspective is summarised and concluded. It is concluded that the body cannot be abandoned and that the body's sacrifice, as a means of becoming immersed in a utopian simulated world, cannot completely negate the body.

The exhibition catalogue is concerned with the analysis of my six stop-motion animation video artworks and how they relate to sacrifice, immersion and embodiment. The work is discussed in relation to its conceptual underpinnings as well as how these concepts relate to the medium of the work, the techniques used to create it as well as the exhibition and installation of the work. Emphasis is placed on the making of the work which is articulated to a phenomenological framework.

CHAPTER TWO: IMMERSION AND CARTESIAN DUALISM IN RELATION TO *WAVE UFO* AND *THE CHRYSALIDS*

2.1. Introduction

The philosophy of Cartesian dualism is examined in this chapter as the underpinning of the cyber-utopian myth.[20] This chapter investigates embodiment in terms of Cartesian dualism as well as how the discourses surrounding immersion into cyberspace and new media art are predicated on the separateness of body and mind. The focus of this chapter falls particularly on the view that the abandonment of the body is desired through immersion into cyberspace as per the myth of a cyber-utopia.

Mariko Mori's new media artwork, entitled *Wave UFO* (1999-2005) (Figure 1, 6-9, 14 & 16-18), as well as the 1955 science fiction novel by John Wyndham, *The Chrysalids*, is used to illustrate my argument concerning disembodiment and Cartesian dualism in cyberspace. A discussion focussing on Mori's *Wave UFO* (1999-2005) and *The Chrysalids* (Wyndham 1955) is formulated in order to reveal that disembodiment, as a sought after state, is a consequence of Cartesian dualism and implied in the cyber-utopian myth. [21]

The abovementioned works are chronologically separated by 44 years. This comparison aims to examine both works within their situated socio-historical contexts in order to identify the theme of disembodiment where notions of embodiment are based on Cartesian dualism. Utopian myths pertaining to disembodiment predate the conceptual and actual existence of cyberspace and have existed in forms other than the ones examined in this thesis[22] as is noted by Bittarello (2008:246). I argue that *The Chrysalids* (Wyndham 1955), written before the inception of cyberspace or the immersion particular to it, contains notions of disembodiment that are also present in the later conceptualisation of cyberspace and new media artworks that use cyberspace.

I argue that *The Chrysalids* (Wyndham 1955) is a text that makes use of the Cartesian mind-body dichotomy as a model for embodiment. Specifically, the female character of Sophie Wender may be

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[20] I argue in chapter four: *Sacrifice and the Body in Virtual Reality: The Body as Scapegoat in New Media Art and The Chrysalids* (75-115), that cyber-utopianism entails sacrifice.

[21] Disembodiment is presented according to the cyber-utopian myth as desirable as it allows for greater freedom in cyberspace (Graves & Fillingim 2004:248).

[22] Wertheim (1999:18) explains that the desires attached to cyberspace and virtual reality were once attached to spiritual pursuits and beliefs that seemed to offer the same things as a cyber-utopia. Wertheim (1999:18) links the elements of the cyber-utopian myth that are related to disembodiment as favourable and allowing for access to a utopian state to such concepts as the Christian heaven, Platonism as well as the Gnostic traditions within Christianity.

understood as representing the body. Sophie as a body is focused on since I argue that she represents a body that is presented as that which should be abandoned.[23]

I begin with an overview of *The Chrysalids* (Wyndham 1955) in order to introduce readers to the relevant aspects of the narrative, to which I refer throughout this study. The overview of *The Chrysalids* (Wyndham 1955) is followed by a discussion of Cartesian dualism, drawing mainly on René Descartes's *Meditations* (2003 [1614]). Cartesian dualism and its prevalence in the cyber-utopian myth is discussed as well as how this is expressed in Mori's *Wave UFO* (1999-2005). Hereafter *The Chrysalids* (Wyndham 1955) as a text is discussed in relation to Cartesian dualism. This is followed by a discussion of immersion and cyberspace as it pertains to the identified Cartesian dualism in *The Chrysalids* (Wyndham 1955). Finally a comparison of Rosalind Morton and Sophie Wender from *The Chrysalids* (Wyndham 1955) is done to demonstrate Sophie's association with the body in its dichotomous relation to Rosalind as the mind.

In what follows I argue that disembodiment, underpinned by Cartesian dualism, informs utopian notions concerning immersion into cyberspace and virtual worlds within cyberspace. Immersion into cyberspace or the virtual world created by new media art (Mondloch 2004:57) is argued as being predicated on the mind-body split. The abandonment of the body through immersion into a virtual reality within cyberspace is discussed as the ultimate goal of the Cartesian dream (Boler 2007:139).[24] The technology of virtual reality and immersion are viewed as a means to obtaining a virtual utopia for the disembodied mind as per Cartesian dualism.[25]

2.2. *The Chrysalids*: A short description of the novel

This subsection is written with the purpose of giving a brief overview of the novel known as *The Chrysalids* (Wyndham 1955) or *Re-birth* (Wyndham 1955).[26] This overview of *The Chrysalids* (Wyndham 1955) is provided so that the reader may become more familiar with the narrative that is of interest to this study.

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[23] In chapter four: *Sacrifice and the Body in Virtual Reality: The Body as Victim in New Media Art and The Chrysalids* (75-115), I situate Sophie's body within a discourse concerning sacrifice. This is particularly discussed in subsection 4.4. *The four stereotypes of persecution in* The Chrysalids (94-100).

[24] The Cartesian Dream is explained by Ajana (2004:1) as the final abandonment of the body by the immortal mind or soul. In this context it is concerned with the mythic values ascribed to technology: that is that technology will finally allow for the separation of the mind and body.

[25] Abandoning the body as a form of progression towards a better life is also linked to the post-human discourse (Cook 2004:1). Post-humanism is not the focus of this study, but it does however inform the discourses surrounding virtual reality as well as forming part of the cyber-utopian myth. *The Chrysalids* (Wyndham 1955) does contain ideas that can be linked to the post-human, but are discussed in terms of Cartesian dualism where it forms part of post-humanism.

[26] For the purposes of this study the more frequently occurring name of the novel will be used, namely *The Chrysalids* (Wyndham 1955).

The Chrysalids (Wyndham 1955) is a science fiction novel that is set in a dystopian[27] future. It is a future that deals with the imagined aftermath of a nuclear event of catastrophic proportions (Priest 2014:[sp]). In this dystopian, post-cataclysmic, world an agricultural, primitive, society has established itself (Krátký 2015:38). This society is strictly hierarchical and rigid, defining and emphasising the norm of embodiment as per human physical standards prior to the cataclysmic event.

Religious conservatism is used as a basis for enforcing the norm as well as ordering daily life. It is a society obsessed with keeping the human form pure, especially through referring to religious writings from the "Old People"[28], Old Testament like principals that have become guidelines in order to identify mutations in the community of Waknuk (Jabarouti & Hardev 2014:448).[29]

In Waknuk, all livestock, crops and individuals are measured against the prescribed pattern set out by the religious Government (Wyndham 1955:21). All the inhabitants of Waknuk need to be seen by an Inspector soon after birth and presented with papers stating that they are officially normal and suffer from no mutations (Wyndham 1955:66). Those who do not qualify for papers are seen as Offenses, Blasphemies, Deviations and mutants. Mutants are classified thus because they are seen as deviating from the true image of God (Wyndham 1955:18). It is believed by the community that extraditing mutated individuals (Blasphemies) and sending them away pleases God. Sending the mutants away is a type of sacrifice to ensure the growth of non-mutated crops and the birth of healthy children and animals (McLeaish 2012:4).

These mutated individuals[30], are sent to the edges of the habitable world, The Fringes (Zubrycki 2004:268). The Fringes is a place on the edges of the Badlands. The Badlands can be understood as wastes still too poisoned by nuclear radiation for humans to live on (Wyndham 1955:20). The mutants inhabiting the Fringes thus try to eke out a living in the heavily mutated and hostile wilderness.

The principal character, David Strorm, is the son of Joseph Strorm, a man who has intense religious convictions against mutations in Waknuk (Wyndham 1955:17). David's upbringing is thus extremely conservative and religious, leading him to not question the rules set out by his society. David's perception changes however when he encounters Sophie Wender, a mutant girl with a sixth toe on each foot.

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[27] Dystopia is cited by Spires (2008:133) as referring to a space where there is disharmony as opposed to a utopian space where an idyllic existence can be led. The word originates from the Greek *dys* (bad) *topos* (place) (Bosman 2014:163).

[28] These 'Old People' are meant to be understood as the humans of the past and the reader's contemporary counterparts (Jabarouti & Hardev 2014:448).

[29] A district in what was once Canada (Jabarouti & Hardev 2014:448).

[30] Mutations seem to be varied in the human characters in *The Chrysalids* (Wyndham 1955). It is, however, impressed on the reader that most deviations, such as Sophie's sixth toe, are small and often trivial. No matter the degree of deviation, the mutants are met with the same intense hatred and discrimination.

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Sophie and her parents flee Waknuk soon after their daughter's mutation is discovered and her fate remains unsure until David meets her in the Fringes ten years later (Stemp 2004:[sp]). From David's initial interaction with Sophie, he becomes more conscious of his community's oppressive and dangerous nature.[31] It is with this new awareness of danger that David, his half-cousin and love-interest Rosalind Morton, together with his younger sister Petra, and a group of children from Waknuk[32] discover that they themselves are mutants with telepathic abilities (Womack 2011:[sp]).

Although the telepaths have no noticeable physical deformity, the group is eventually discovered to be mutants some years later. Most of them abandon Waknuk in order to escape persecution by the authorities (Wong, Kuperis, Jamieson, Keller & Cull-Hewitt 2002:183). During their flight they make contact with a woman from Sealand[33] through Petra, an exceptionally strong telepath (Wyndham 1955:135). This telepathic woman informs them of a technologically advanced society of telepaths and offers to rescue them on account of Petra's extraordinary gift (Wyndham 1955:141,145).

After a long, eventful journey, David, Petra and Rosalind finally reach the Fringes. They at first believe the Fringes to be a place which might offer them momentary safety as they are pursued by men from Waknuk (Wyndham 1955:133). Instead, the community proves hostile, asserting their own needs and values. The ruler of this community, the Spider-man/Gordon, intends to use Rosalind for the purpose of having a progeny (McLeaish 2012:32). Rosalind is saved from this fate when Sophie reappears and intervenes, hiding David and rescuing his travelling companions (Wyndham 1955:174).

Before long, however, the pursuers from Waknuk, who initially set out to capture and punish the telepaths, redirect their attention to more attainable prey. The Fringes' mutants are attacked by the mob from Waknuk, resulting in a battle where Sophie is killed (Wyndham 1955:187). This takes place just as the Sealand woman arrives in a helicopter. She kills all the people involved – mutants and normal people – except the telepaths (Gomm 2010:[sp]). She then promises to take the telepaths to an almost utopian city where they can be part of a superior telepathic society (Jabarouti & Hardev 2014:445).

Green (2000:iii) states that *The Chrysalids* (Wyndham 1955) is a critique on society as expressed through the character's experiences, specifically, a critique of blindly believing in the ideologies of any institution. This idea can be seen through the people of Waknuk's absolute faith in the Old People's standards. The fundamentalist fervour with which they cling to religious texts are

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[31] David is more aware of the oppressive laws enforced in Waknuk, as with his aunt's mutated baby, which his parents urge her to give up (Wyndham 1955:71). David's aunt later loses her life because of the baby and David understands that she was killed by the community (Wyndham 1955:74).

[32] Michael, Katherine, Sally, Anne, Rachel, Walter Brent and Mark (Wyndham 1955:81).

[33] Sealand is meant to be New Zealand, but, due to a communication problem and Petra's inability to read, it becomes Sealand (Wyndham 1955:135).

represented as leading to atrocities in order to defend these ideals (Green 2000:iii). The novel is thus written from the point of view of those who become victims of this irrational belief in ideologies.

This critique is purposefully woven into the narrative, but some ideas prevalent in the novel are not as intentional. What is of interest to this study is the way in which Wyndham approaches embodiment. Wyndham's ideas concerning the body and mind reveal certain theories at play regarding embodiment that are still prevalent in our contemporary information society; particularly, theories based on Cartesian dualism.

2.2. Cartesian Dualism

In what follows a short overview of Cartesian dualism is provided. Major points concerning Descartes's argument for the body and mind as separate are discussed so that they might be applied later in this study. Some of the points touched upon include the mind as indivisible and immortal, the body as divisible and mortal, the senses as deceptive, the mind as the only truth and the seat of the self, as well as the mind as a thinking, unextended substance and the body as an unthinking, extended substance.

Cartesian dualism and the body as disposable is traced back to Descartes's theory on the body and the mind in his *Meditations* (2003 [1614]). This work mainly contains Descartes's questions concerning the way to obtaining truth, but also his speculation on the nature of the self (Hatfield 2014:3). The theories that follow in his *Meditations* (Descartes 2003 [1614]) deal with the mind as being separate from the body.

Descartes's second meditation concerns the human mind and how it is more knowable than the body (Williams 2005:213). Descartes's search for an indubitable Archimedean point, a truth that cannot be doubted, forms the opening of the second meditation (Wang 2013:1). This indubitable truth is revealed through the mind, and all else contains doubt: the existence of the body and the world perceived by means of our bodily senses is ultimately uncertain (Mohammed 2012:99).

Importantly, according to Descartes's view, the senses are deceptive. Descartes (2003 [1614]:67) explains that his senses have often deceived him in the past, and although he has learned many things from them, it is better not to trust in something that has shown itself as fallible. The doubt of the senses, and their relation to the physical body, thus fosters doubt about the body. It is, however, claimed by Descartes (2003 [1614]:67) that although one can be deceived by the senses concerning the world, one need not deny that one has a body and that it belongs to the thinker.

The mind must exist since one thinks and is aware of one's own thoughts, notwithstanding the fact that the world can be misleading and its truth questionable (Pynn 2012:1). Whatever might be deceptive and impairs the truth about the physical world, still cannot convince the thinking being that

he/she does not exist, because he/she is the one thinking these things. This leads Descartes to conclude that he is a thinking thing (*res cogitans*), an idea embodied in his famous axiom: *cogito, ergo sum*, or, "I think, therefore I am" (Hoffman 2002:68). The body is thus something that can be cast off from the self and does not constitute the self. Cartesian dualism places thought, or the mind, as an attribute of the self, it is something that cannot be separated from the self (Crossley 2001:33). One is not one's body, which is described by Descartes (2003 [1614]:73-74) as a collection of limbs.

The senses of the body should however not be denied, since one does *seem* to see or to feel. According to Descartes (2003 [1614]:77) the body can however not be understood without the mind. It takes the mind's interpretation of the sensory input from the body in order to create any epistemic meaning out of these experiences (Wang 2013:2). The body's perception of the world and the body itself can thus only be an intuition of the mind (Descartes 2003 [1614]:77). The mind is knowable and immediately available to introspection; but the body, being an extension and a composition of limbs, can be doubted and never truly known (Skirry 2005:[sp]).

The body extends into the space of the real world and it has to inform the mind of space and what exists in it through sensory perception (Benett 2012:6). Experiences of sensory perception are however not all at once received from every body part, but rather this information is sorted and understood by the mind. According to Descartes (2003 [1614]:118), the physical body in all its various divisible parts is not involved with understanding the input of the senses it experiences. Instead, the mind is fully engaged with sorting sensory information and making sense of it (Descartes 2003 [1614]:120).

Mind is perceived by Descartes as having no divisible parts: it is a whole and it is with the entirety of the mind that one thinks and perceives one's existence (Lacewing [sa]:3). This stands in opposition to the body, which is divisible[34]. Sensations perceived by the imperfect extended body are thus understood as being only "confused modes of thought" (Hatfield 2014:[sp]). This is because sensations are received by the body from an external, usually material, source, which the mind is thereafter charged with sorting out (Hatfield 2014:[sp]).

Descartes (2003 [1614]:118) states that the body is a material thing because, like other material things it can be separated into different parts, which makes it imperfect.[35] It then follows that the indivisible mind is not material, not imperfect, but of a different substance which can be distinguished from the imperfect, divisible body. One's essence, or substantial selfhood, is as an unextended thinking thing

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[34] If one were to lose a hand or arm or leg it would, according to Banach (2006:[sp]) not subtract from who one is: the thinking thing is not lessened or compromised.
[35] Descartes argues that since the body can be separated into may parts it is not a whole like the mind is a whole (Skirry 2005:[sp]). Descartes further argues that since the body is divisible it can change into various combinations, which alter the body itself, unlike the mind which is indivisible, unchangeable, and thus perfect (Skirry 2005:[sp]).

(*res cogitans*) and one can have knowledge of the body only as a separate substance, since it is extended and unthinking (*res extensa*) (Mattey 2011:7).

One therefore *is* a mind but merely *has* a body. The question of whether one *has* a body is thus accorded secondary importance as Descartes explains that it might be possible for him to have a body with which he is intimately joined, though this ultimately remains metaphysically uncertain (Skirry 2005:[sp]).

Grosz (1994:3) asserts that through viewing the mind as being of greater importance than the body, a hierarchy is created between the body and mind. The body becomes reduced to an object whilst the mind is the subject (Murray & Sixsmith 1999:138). The body is linked with nature and natural laws, an object that is explainable through science; whilst the subject, the mind, is placed above this natural order (Thomas 2004:[sp]).

Descartes (2003 [1614]:112) deduces that that which makes one a self, namely the thinking mind, is separate from the unthinking body, and that one can continue without the body since it is but an object which one has and which one can therefore discard. This particular formulation is known as mind-body dualism, or Cartesian dualism, and is pertinent to the discourses surrounding immersion and virtual reality (Braun 2009:[sp]), as I shall demonstrate in the following subsection.

2.3. Immersion, virtual reality and Cartesian dualism

Cartesian dualism as it underpins immersion, virtual reality as well as cyber-utopianism is discussed in what follows here. Mind-body dualism is inexorably linked to cyberspace and immersion according to Murray (2000:152). This subsection investigates immersion and virtual reality in relation to Cartesian dualism concerning virtual reality's aim of excluding the body.

Immersion is a field wherein sensory input takes precedence, since immersion is dependent on it (Coyne 1994:66). Immersion takes as its starting point the Cartesian notion that it is the mind which finally interprets the senses. The fallible senses can thus be fooled, receiving input through the imperfect extended body that enables the mind to feel more present in a virtual world (Heim 1998:7). That is, to the mind, fooled by the fallibility of the senses, the virtual is taken to be the actual or real world. This process ultimately helps facilitate immersion (Coyne 1994:66).

Murray and Sixsmith (1999:318) liken virtual reality with sensory deprivation but conclude that it is in fact a *substitution* of senses that takes place. Penny (1993:20) states that the Cartesian mind-body split is reinforced by Virtual Reality through immersion. Virtual Reality aims to replace the real, sensorial body, with a body that is a simulation conceived and sustained by the mind (Penny 1993:20).

This digitally simulated body, unlike the real body, is thus completely under the control of the mind, not a divisible or fallible object, but more closely related with the subject/mind. It can however be subject to fallibility if the apparatuses supplanting the senses are faulty, leading to an interruption of immersion. Immersion is viewed as a process of disembodiment (Davies 2004:[sp]). In this view, akin to Cartesian dualism, the body is not a true part of the self which experiences reality (be it actual or virtual), and thus it is an object that can be cast off to free the mind for immersion (Murray & Sixsmith 1999:318). The true self is thus viewed as the mind, and the perfect existence in cyberspace consists of a subject that is a wandering, uploaded, consciousness (Bell, Loader, Pleace & Schulter 2004:11).

The divisibility of the body is exemplified by death. The desire to cast off the dying body and escape into the almost utopian space of virtual reality can be seen as part of the Cartesian Dream (Daubner 2003:[sp]). This is the desire to finally overcome the boundary of the fallible, mortal body so that the immortal mind/soul may live on (Falzon 2006:108). Cyberspace becomes viewed as the site of the realization of the Cartesian dream. Theorists like Lupton (1995:479) describe the Cartesian dream as the dream of cyber culture. The dream of cyber culture consists of getting rid of the dying, constricting body in order for the mind to have a "pure" relationship with machines which will distil the self/mind.

From the above it is apparent that Cartesian dualism is the underpinning notion of embodiment within the discourses of virtual reality, immersion and the cyber-utopian myths informed by these concepts. Simply put, the body's senses are fallible and supplanted by technology to attain immersion. That is, the separation of the mind and body is required for full immersion into virtual reality.

2.4. *Wave UFO*, Cartesian dualism, and immersion

Wave UFO (Mori 1999-2005) (Figure 1, 6-9, 14, 16-18) is a new media artwork which makes use of immersive technology (Kozka 2010:26). As such, this subsection investigates and discusses *Wave UFO* (Mori 1999-2005) as an example of the use of immersive technology coupled with virtual reality which is informed by a cyber-utopian agenda as it concerns the body. In the following subsection emphasis is placed on *Wave UFO*'s (Mori 1999-2005) interface and how it manipulates the senses to attain better immersion.

Wave UFO (Mori 1999-2005) is an installation piece designed to accommodate three people at a time (Figure 14). It is a large, sculptural object in the shape of a tear drop, meant to invoke links between the smooth fibreglass object and travel to other worlds (Landi 2012:72). This can be seen in the figure below as well as in Figure 1 and 17. The staircase leading into the installation has pressure-sensitive stairs. When triggered, the stairs display images concerning the construction, inspiration and conception of the work (Kortbek & Grønbæk 2008:4). Once inside *Wave UFO* (Mori 1999-2005)

(Figure 1, 11-15), the participants' brains produce projected videos (Fineman 2006:1) (Figure 7, 8 & 16). In order to create these videos the participants are hooked up to different EEGs,[36] as can be seen in Figure 9 and 14 (Kortbek & Grønbæk 2008:4), which are headsets with sensors connected to their foreheads (Zioga, *C*hapman, Ma & Pollick 2014:6). They then lay back on Technogel[37] beds (Figure 7, 14 & 18) while a computer receives the information from the headsets and projects animations onto the ceiling (McMullen 2003:33) (Figure 7).

Figure 6: Mariko Mori, *Wave UFO*. 1999-2005. Fiberglas, Technogel, Acrylic, Carbon fibre, Aluminium, Magnesium and Digital media, 4.93 x11.34 x 5.28 m. Madison Avenue, New York. (Jojo Scope 2011:[sp]).

Inside *Wave UFO* (Mori 1999-2005) brain activity from the two hemispheres of the brain influence the projections as well as the activity of different types of brainwave. Alpha (blue), beta (pink), delta (yellow) and theta (also yellow) waves are projected as different moving colours (Zioga *et al.* 2014:6) as can be seen in the figure below, as well as in Figure 8 and 16. These brainwaves are also linked to different levels of consciousness and are represented by different shapes and colours occasionally merging as the left and right hemispheres of the brain work together (Pinchuk Art Centre 2012:3).

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[36] An EEG, or an electroencephalogram, detects the electrical impulses that cells in a human brain use to communicate through flat metal discs placed on the head of the subject (Mayo Clinic 2016:[sp]).
[37] Technogel is made of polyurethane, which is soft-solid and is able to shape itself to one's body when used in chairs or beds (Technogel Worlds 2014:[sp]).

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The participants' coherence is measured through coherence spheres; this is when the Alpha waves synchronize in both hemispheres of the brain (Zioga *et al.* 2014:6).
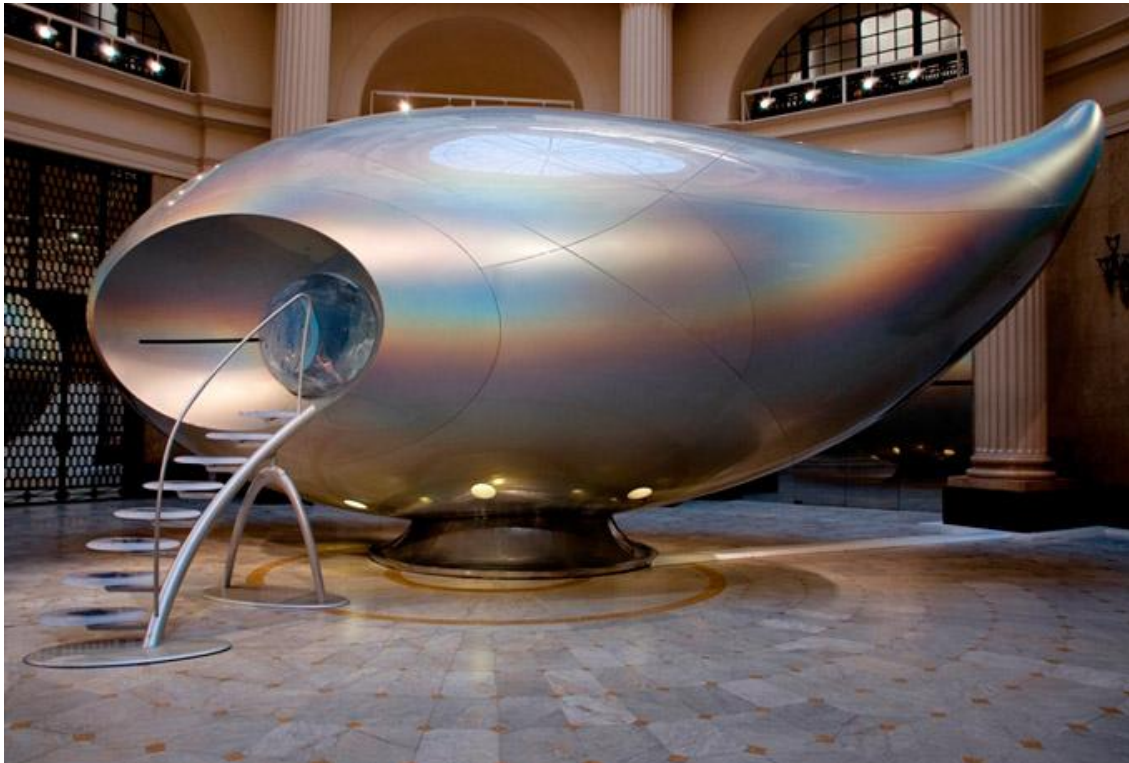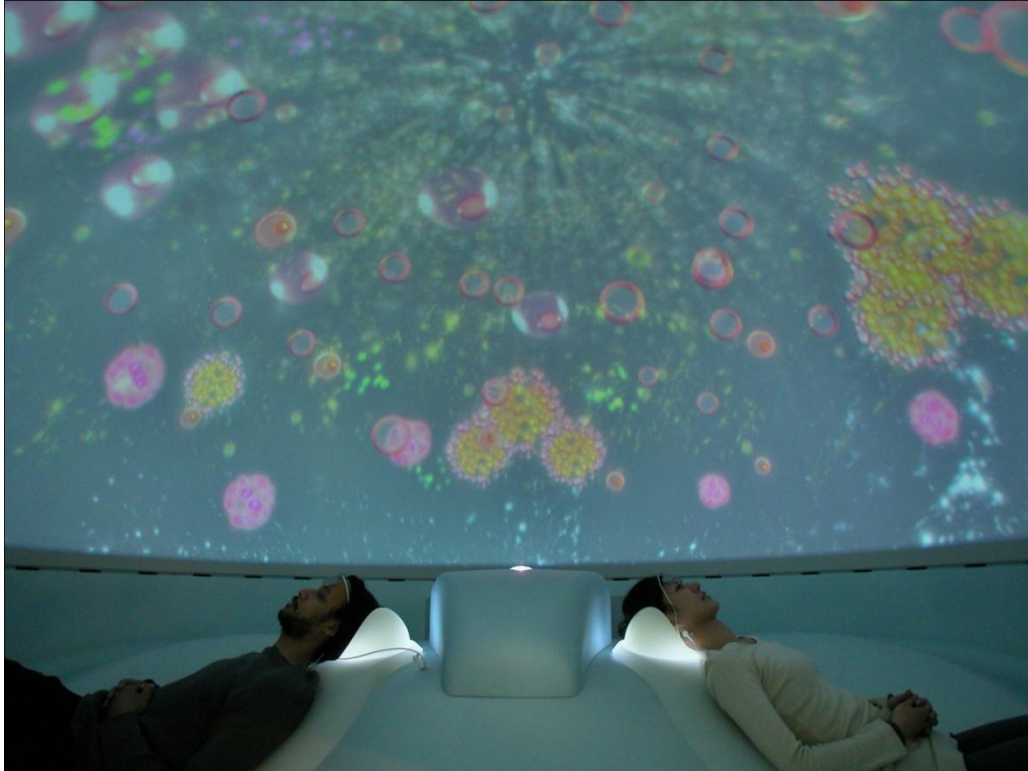

Figure 7: Mariko Mori, *Wave UFO*, 1999-2005. Fiberglas, Technogel, Acrylic, Carbon fibre, Aluminium and Magnesium, 4.93 x 11.34 x 5.28 m. Madison Avenue, New York. (Orbit 2006:[sp]).

A second part of the immersive experience in *Wave UFO* (Mori 1999-2005) concerns the animation, *Connected World* (Mori 1999-2005) a part of which is shown in the above figure as well as in Figure 8 and 16. *Connected World* (Mori 1999-2005) is dreamlike, concerned with the past and future, as it presents the viewer with a dream-world of organic shapes becoming increasingly complex (Pinchuk Art Centre 2012:3). This simulated, or virtual, world is immersive and is centred on creating an experience of absorption (Pinchuk Art Centre 2012:3).

Mori's *Wave UFO* (1999-2005) is immersive on several levels. The first examination of its immersive qualities concerns the interface. For new media art, like Mori's *Wave UFO* (1999-2005), Grau (2003:10) notes that human senses are connected to the worlds that new media art offer through the interface of such artworks. *Wave UFO*'s (Mori 1999-2005) interface can be understood as the participants' brainwaves monitored through the EEG and rendered on the screen and ceiling (Vidal 2009:26) as is demonstrated in Figure 7. Through the changes in these projections displayed on screen, or the ceiling, the participants can witness their interaction with the technology of the artwork. The dream-world of *Connected World* (Mori 1999-2005) is also shown in this way, allowing the

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viewer a glimpse into a utopian simulated reality (McMullen 2003:33). An example of *Connected World* (Mori 1999-2005) can be seen in the figure below.
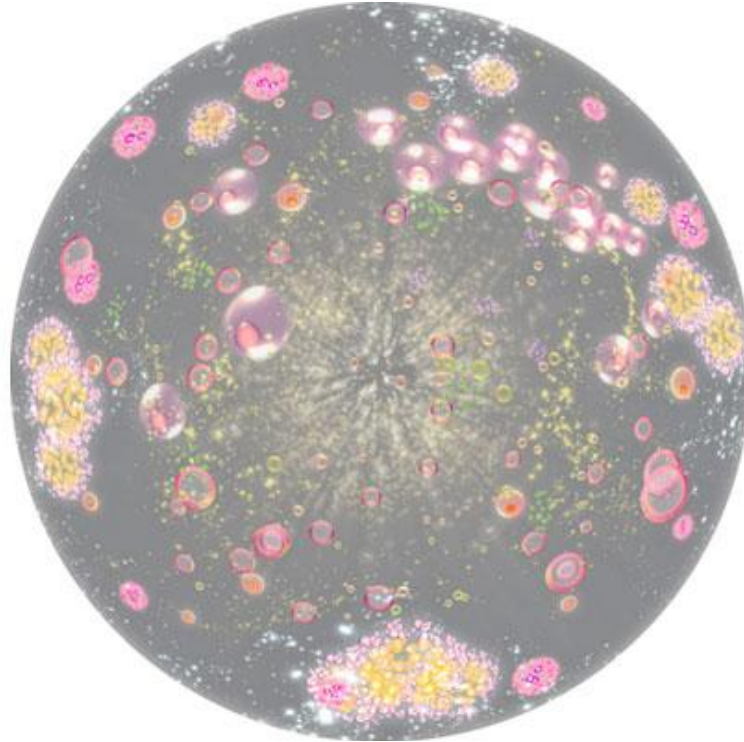
Figure 8: Mariko Mori, *Connected World*, 1999-2005. Digital media (still). Variable. (DrediKnight 2005:[sp]).[38]

Wave UFO's (Mori 1999-2005) interface, and thus its immersive qualities, differ from most new media artworks involving virtual reality. This is because *Wave UFO*'s (Mori 1999-2005) interface is dependent only on the brain's interaction with the virtual, and not the rest of the body. Grau (2003:164) refers to this mode of interaction with the interface in order to achieve immersion as a "brain interface".[39]

According to Lécuyer, Lotte, Reilly, Leeb, Hirose and Slater (2008:1), a brain-computer interface facilitates a direct link of the participant's brain with the virtual world, allowing their interaction with this world in real time to circumvent the body[40]. The ideal brain-computer interface involves all the

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[38] *Connected World* (Mori 1999-2005) was also turned into a body of physical artworks in 2002, titled: *Connected World (Photopaintings I-VI)* (Allbright-Knox Art Gallery 2012:[sp]). For the purpose of this study *Connected World* (Mori 1999-2005) is only discussed in so far as it is used in relation to *Wave UFO* (Mori 1999-2005) due to the focus of this study on immersion and embodiment.

[39] This technique was developed by Philip Kennedy and Philipp Bakay's team and was first used successfully in 1998 on the brain of Johnny Ray (Cantoni 2005:215).

[40] As with most Cyber-utopian conceptions of embodiment, the brain and mind are often conflated. In some instances the brain is viewed as a medium of the mind (Penfield 2015 [1978]:[sp]). Although the physical brain

senses, as interpreted by the brain, and facilitates a superior form of immersion (Lepuschitz 2010:147). This can be seen in Figure 9's depiction of EEG headsets as well as Figure 7 and 14 where the reclining participants are using only the headsets to interact. *Wave UFO*'s (Mori 1999-2005) version of the brain-computer interface still involves the brain and the sense of sight, but it functions according to the Cartesian notions concerning embodiment.

Cartesian dualism may be seen as reinforced by *Wave UFO*'s (Mori 1999-2005) immersive interface. Dede (2012:8) states that immersion is particularly linked to the visual system of the participant: the better the interface can manipulate the visual senses of the person involved, the more immersive the experience may become. The brain-computer interface in *Wave UFO* (Mori 1999-2005) also provides the reclined viewer with a panoramic view of the projected virtual world as shown in Figure 7. The viewers are thus surrounded by a virtual image they can manipulate with the minimal use of their bodies.

Dede (2012:8) explains that large panoramic views as interfaces also facilitate immersion.[41] Visual immersion is usually only one aspect of overall immersion. The visual system however orientates the user in both the physical and virtual world, allowing for the body's location in space to be better perceived (Cummins & Bailenson 2015:[sp]). Cyberspace, or a virtual world within cyberspace, may also be understood as an illusionary *visual* world, dependent mostly on the user's ability to see it (Grau 1999:365). The visual and mental threshold of a user may become oversaturated with the use of large screens or projections, especially when they cover more than 360 degrees. *Wave UFO*'s (Mori 1999-2005) is described by participant, Zoë Ryan (2003:[sp]), as a dizzying and mesmerizing display, do doubt due to the size of the installation. The user feels surrounded by this world and he/she privately becomes more susceptible to blurring their bodily boundary, as perceived by the senses, and leaving the physical body behind (Nechvatal 2001:421). The blurring of the bodily boundary is also more effective if the nature of the interface as an object is kept minimal.

Wave UFO's (Mori 1999-2005) interface as an object in and of itself is not very apparent since the viewer's interaction with it involves no other senses, save the visual system in relation to brainwaves. Grau (1999:365) explains that the level of immersion increases based on the intimacy with which an interface is connected to the senses. *Wave UFO*'s (Mori 1999-2005) connection may be seen as very intimate since the interface includes the EEG devices connected to the user's brainwaves as shown in Figure 9 (Pinchuk Art Centre 2012:3). These EEG readings of the user's brainwaves are also particular to the user's private thought patterns, which are visually rendered (Kuni 2007:[sp]). The

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can be viewed as part of the body, the physical nature of the brain is often overlooked in favour of promoting concepts pertaining to the metaphysical nature of the mind.
[41] The relevance of projections and how it is related to immersion is discussed in the accompanying catalogue, *The Body of Sophie* (Le Roux 2016) on page 54. It is however noted that the used projections in my work are rather meant to place focus on the body as opposed to drawing attention away from it.

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mind, through the brainwaves, as per this interpretation, in coordination with the visual systems interact with the virtual world; the body is viewed as non-crucial to this process of the immersive experience.

Figure 9: *Wave UFO* (Mori 1999-2005) EEG, Venice Biennale, 2005. (Interactive Brainwave Visual Analyser [sa]:[sp]).

Immersion is further facilitated by *Wave UFO* (Mori 1999-2005) through its manipulation of the senses. It blocks out most physical stimuli through its architecture, which isolates the participants in a small teardrop-shaped dome (Landi 2012:72), as is shown in Figure 1, 6, 14 & 17.

There is nothing to distract the participants from the virtual world within *Wave UFO* (Mori 1999-2005). This artwork is described by Hibner (2014:2) as being *womblike*.[42] The womblike characteristics of *Wave UFO* (Mori 1999-2005) imply that the participants are safely enveloped[43] by the artwork. The visual input within the artwork excludes everything outside of it while the participant is stimulated by the large projections of their aestheticized brainwaves which can be seen in Figure 7 (Art Daily 2015:[sp]). Similarly, taste, touch, smell and auditory input are limited to what is inside the capsule of *Wave UFO* (Mori 1999-2005).[44]

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[42] The notion of *Wave UFO* (Mori 1999-2005) being 'womblike' could be related to the safety and serenity associated to the womb by writers such as Rajah (1999:[sp]), when describing immersive virtual and new media art pieces. Robins (1996:122) similarly describes immersion as being in a womblike state as it is associated with floating and comfort. Rajah (1999:[sp]) further describes the womblike association with immersion to be like deep sea diving. This can be linked to a feeling of oneness, due perhaps to the malleability of the bodily boundary in this state, which is described by Nechvatal (2001:37).

[43] Mori (1999:[sp]) herself, in an interview with Michalarou, states that *Wave UFO* (1999-2005) is a capsule that is meant to encompass her body. The idea of being completely enveloped by the artwork is thus stipulated by the artist.

[44] *Wave UFO* (Mori 1999-2005), through its control of the environment bares resemblance to the older CAVE (Cave Automatic Virtual Environment) systems. *Wave UFO* (Mori 1999-2005) differs from these systems in a fundamental way, however. CAVE systems often involved the body. The body motions were tracked within the closed-off space and the user was confronted with a body image to manipulate (Stern 2013:117). In Mori's

Wave UFO (Mori 1999-2005) can be described as highly immersive. Its interface, which is a brain interface, is intimately connected to the participants and is relatively unseen. A panoramic view is created by *Wave UFO* (Mori 1999-2005) which further immerses the viewer due to its focus on visual stimuli. Finally the UFO itself is designed in such a way that bodies are mostly at rest when participating, but so that the senses are also shielded from interference that could disrupt immersion. Based on the above one can conclude that *Wave UFO* (1999-2005) is a new media artwork bound up in the discourses of virtual reality and immersion with regards to its reinforcing of Cartesian dualism through the use of virtual technologies.

2.5. *Wave UFO*'s conception and cyber-utopia

Mariko Mori's conceptual reasons for creating *Wave UFO* (1999-2005) also feed into the grand utopian narratives surrounding cyberspace and Cartesian dualism. *Wave UFO* (Mori 1999-2005) is investigated in what follows concerning its use of the idea that a perfect virtual community is associated with the mind, not the body.

Khan (2007:62) states that Mori's main theme in artworks such as *Wave UFO* (1999-2005) is concerned with unity or "oneness". This sense of unity includes a particularly utopian notion not only of individuals becoming aware of their connectedness to each other, but also the blending of technology and consciousness (Kozka 2010:26).[45]

In the discourses surrounding cyberspace, the interaction and unification of users is also pertinent. Unity in cyberspace is connected with the dream of a harmonious community based on mutual understanding, capable of providing wholeness (Robins 1996:88). Cyberspace is seen as providing for users' unity and uniformity (Imken 2004:95). The perfect community is thus attainable in cyberspace, but in order for this community to be reached, even for it to exist, the body needs to be left behind.

A community in virtual reality is a means to shift the focus away from physical differences that could otherwise disturb the unity of a community as explained by Lockhard (2000:173). The material/physical no longer hampers the virtual community. Cyberspace is thus used as a unifying factor for disembodied users. Issues that could disturb the perfect virtual community of users all centre on the body. The body's race, age, sex, gender, ethnicity and (dis)ability is seen as left behind

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Wave UFO (1999-2005) it is not primarily the body that controls the interaction with the virtual world, but the brain or mind.

As with the CAVE system, the body in *Wave UFO* (Mori 1999-2005) is isolated from other sensorial input to facilitate immersion (Vidal 2009:26). *Wave UFO* (Mori 1999-2005) however does in no way actively involve the body as a CAVE system might. The body of the user comes into contact with nothing except the Technogel bed. It is not active in any way. All the bodily senses that cannot partake of the artwork within *Wave UFO* (Mori 1999-2005) are excluded and not intentionally stimulated. The body is passive while the mind is actively participating in the experience of creating and interacting with the virtual art piece.

[45] Mori (1999:[sp]), as interviewed by Michalarou, states that the vision of the future with technology as a healing tool is possible through imagination and the use of the mind.

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when a user enters cyberspace (Brophy 2010:930). He/she can thus only be judged on their 'true self', that is their online, bodiless presence particular to the mind, within a community of minds.[46]

Through getting rid of constraints such as the body, the true self, or subject, can step into cyberspace and interact with others like itself (Wilbur 1997:48). Without bodies, or "carnal vessels", as Rheingold (1993:23) terms them, to engender biases, virtual community members can be understood as beings who think, feel and convey ideas. The true self in virtual reality is thus separate from the body, and is a being that wishes to be understood as primarily involved in thinking.

The interaction of minds in cyberspace can be understood as a type of "groupmind" (Willson 1997:644). The groupmind, as explained by Willson (1997:644), is the global interaction of users with other minds via cyberspace as well as getting to know their own minds better. This groupmind is also a living database that is accessible to all within cyberspace and goes beyond limits of physical societies (Day 1998:152). What disembodied cyberspace thus engenders is a collective mental space without an inhibiting body.

Mariko Mori's *Wave UFO* (1999-2005) presents the viewer/participator with a utopian vision of universal interconnectedness (Vidal 2009:26) (Figure 7, 8 & 16)[47]. Mori (2013:[sp]), in an interview with Marzo, states that connected consciousness is a concern in her work. This may also be applied to *Wave UFO* (Mori 1999-2005). The emphasis on the connection between the three participants in Mori's capsule could be an indication of this notion. The participating individuals are connected not through their physical bodies, but through their brainwaves as shown in Figure 7. As the individuals reach the same state of consciousness, the images around the room begin to form a circle, indicating their connectedness (Zioga *et al*. 2014:6). This connectedness is however demonstrated through images that are meant to be more closely related to the mind than the body.

As with much of Mori's other work, *Wave UFO* (1999-2005) is centred on the Buddhist notion that all living things are interconnected (Pinchuk Art Centre 2012:3). Religion and the grand narratives surrounding cyberspace share an intimate and interesting relationship.[48] What is of interest to this study at this point of the discussion is the fact that the notion of *unity* is based not on the physical interaction of individuals, but on the interaction between their minds within the simulated world of

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[46] Willson (1997:644) explains that in the contemporary information age, the interconnectivity between people, through the internet and cyberspace, is at an all-time high. Paradoxically, individuals feel more isolated from one another and search for a new *togetherness* that is meaningful (Willson 1997:644). Many individuals search for new meaningful experiences with others, but wish to avoid the oppressive nature of real communities (*Gemeinschaft*, meaning community) (Memmi 2006:292). The virtual community allegedly offers such individuals a chance to share experiences with likeminded people, retrieving ideals and values lost in real communities (Robins 1996:88).

[47] The utopianism that is connected to and reinforced is discussed in relation to my body of work in the catalogue, *The Body of Sophie* (Le Roux 2016), on page 16,18 and 55.

[48] This is not the focus of my study and is therefore only touched upon in chapter four: *Sacrifice and The Body in Virtual Reality: The Body as Victim in New Media Art and* The Chrysalids (75-115), 4.3.2. *The Crime of the body in* Wave UFO, specifically footnote 100.

Wave UFO (Mori 1999-2005). This also pertains to the Cartesian notion that the mind is of a higher importance than the body.

Wave UFO (Mori 1999-2005) can also be interpreted as a new media artwork that is conceptually utopian due to its focus on the ideal interconnectedness of human minds. The cyber-utopian notion of community and the disruption of community through physical difference is reflected in *Wave UFO* (Mori 1999-2005). Mori focuses on oneness, but emphasises the interaction of minds above the interaction of bodies in her utopian inspired artwork.

2.6. Cartesian Dualism and *The Chrysalids*

Cartesian dualism as it pertains to *The Chrysalids* (Wyndham 1955) is discussed in this subsection. Focus is placed on Wyndham's conception of Darwinian evolution and how this exemplifies the idea of Cartesian dualism in *The Chrysalids* (Wyndham 1955). I argue that evolution of the mind is deemed more important than that of the body by Wyndham in *The Chrysalids* (1955). Cartesian dualism as represented by the mutants, telepaths and ordinary humans is discussed. I argue that the telepaths represent the mind and the mutants the body.

Cartesian thought is part of a larger metanarrative concerning reason and science.[49] This metanarrative posits that humans have an innate capacity for reason, by means of which they are capable of breaking away from the ignorance of the past in order to realise the idealistic notion that the human condition can be universally improved through the application of the rational mind (Plumb 2008:66). Cartesian dualism subscribes to this rationalist logic inasmuch as it creates categories with set boundaries emphasising the power of the rational mind above the non-rational body (Williams 2007:132).The dualistic distinction between the rational mind and the non-rational body becomes a fixed dichotomy, along with the dichotomy of rational science versus non-rational superstition (Caldwell 2007:2). Science, as a discourse emphasising the strict application of rational thought as a means of interpreting and controlling nature, is also viewed as that which might contribute directly to the progress of humanity and the improvement of our human condition.

The Chrysalids (Wyndham 1955) as a science fiction novel, deals with humanity's relationship with science.[50] Science fiction operates within the discourse of science, and deals in particular with changes concerning technology and scientific advances as well as how this influences people in the imagined past, alternate worlds or the future (Gunn 2000:74). It is, however, through imagining

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[49] This idea is reflected in the ideas of The Enlightenment, which was concerned with discovering the truth about the universe and strove to attain mastery over it through reason and order (Goffey 1998:63). Contemporary science is still influenced by Enlightenment thinking. It supplants the notion of spiritual revelation to attain objective truth, that is, scientific fact (Mohler 2005:1).

[50] Many earlier science-fiction novels, due to their close relationship with science and the notions that surround it, were influenced by Enlightenment thinking (Kitchen & Kneale 2001:21).

alternate futures, either showing the progression[51] or regression of humankind based on their relationship with technology, that science fiction is better known for expressing critique of the present (MacLeod 2003:8).

Wyndham does deal with the relationship between humanity and technology, but describes his dystopia in less harsh terms.[52] *The Chrysalids* (1955), like many of Wyndham's other science fiction novels[53], has been termed a "Cosy Catastrophe" story wherein the apocalypse seems tame (Pringle 1985:30).[54] Like the contemporary writers of his time Wyndham was greatly influenced by the idea of nuclear war.[55]The effects of radiation from a nuclear event, particularly concerning genetic deviations and mutations, greatly influenced Wyndham (Stock 2011:208). Wyndham's interest in new scientific research concerning mutation, may be seen as the inspiration for his mutated characters in *The Chrysalids* (1955), including his telepathic characters. The nuclear age and the effects it generated, such as genetic mutations, were transformed in *The Chrysalids* (1955) from bleak tragedy into a possibility concerning human evolution (Claeys 2010:141).

Wyndham was a professed Evolutionary Darwinist (Anders & Rennison 2006:164). Darwinian evolution operates according to Natural selection (Griffiths 1999:[sp]). Natural selection, according to Schoch (2014:259), is a creative force which generates better adapted organisms by maintaining only those organisms with the best genes in any generation. The accumulation of these good genes through the generations thus shape a new organism that is more fit to survive than all its predecessors. Throughout this process, some entities emerge that are not fit to survive in the long run. Natural selection thus eliminates such variants of the species (Futuyma 2004:[sp]).

It should however be noted that Wyndham's interpretation of Darwinian evolution is presented not as a system that is continuous and on-going. From my interpretation of *The Chrysalids* (1955), I conclude that Wyndham might have viewed Darwinian evolution as a system that worked towards the creation of an ultimate, or more perfect, human being. Wyndham's presentation of evolution in *The Chrysalids* (1955) suggests that a 'Supreme Being' (the telepaths) will emerge from the process of

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[51] This is an Enlightenment value.

[52] Pringle (1985:30) expresses the opinion that Wyndham wrote intelligently, reacting against Romantic science fiction like that of H. G. Wells. Wyndham often focused more on human relationships within a post-apocalyptic/dystopian setting then on the dystopian events themselves (Word Press 2012:8). It then follows that his novels described catastrophes more as backgrounds against which character interaction takes place.

[53] Wyndham had many pseudonyms and often changed between them (Sf- encyclopedia 2001:[sp]). The most well-known science fiction novels by Wyndham, under that name, are: *The Day of the Triffids* (1951), *The Kraken Wakes* (1953), *The Midwich Cuckoos* (1957), *Throuble with Lichen* (1960), *Chocky* (1968), *The Secret People* (1972) and *Web* (1979) (Sf- encyclopedia 2001:[sp]).

[54] Anders & Rennison (2006:165) explains that the worlds presented by Wyndham seemed tamer, calmer, when compared to the author's actual socio-historical context.

[55] In 1955, the same year *The Chrysalids* was published, more novels concerning nuclear events had been published than any year after 1946 (Brians 1984:255). This was due to mounting public fears in 1954 concerning nuclear testing and its effects on humans. Anxiety concerning the Cold War and the atomic bombs of the 1950s was also very high (Eaglestone 2012:162).

evolution. The beings, such as the mutants, that are not even human, are seen as products of nuclear mutation and evolutionary failures.

Utopian thinking is tied up with the idea of progress (Viera 2010:9). Through the notion that humans will evolve into something that is more than human a utopian element is introduced. *The Chrysalids* (1955) is in essence a dystopian novel (Fitting 1979:64), but it still contains utopian traces. *The Chrysalids* (1955) presents evolution as the key to a distant future without strife for those whose minds have evolved.

The Chrysalids (1955), through its emphasis on evolution and progress can thus also be read as containing examples of the post-human.[56] Through the influence of technology, that is the nuclear fallout, mutants and telepathic beings are able to emerge. It is only the telepathic beings, which are considered the ultimate new form of human life. The argument can be directed back to Cartesian dualism in that post-humanism often still clings to the conception of mind and body as separate (Melzer 2006:[sp]). This is because the liberal subject is understood by post-humanism as located in the rational mind whilst the body is simply a possession of the liberal subject, but not the subject him/herself (Melzer 2006:[sp]). Although evolution is important in *The Chrysalids* (1955), it is only the evolution of the mind that is expressed as leading towards something that is more than, or superior to, humans.

The evolution of the human race, as well as the resulting intra-species conflict, is described by Wyndham in a pragmatic and unsentimental manner (Anders & Rennison 2006:165). This pragmatism can be seen in the unemotional climax of *The Chrysalids* (1955) where all inferior beings involved are simply killed by the telepathic woman from Sealand (Anders & Rennison 2006:164). Intra-species conflict, or fighting for the right to continue existing within a species with different variations, is resolved when life forms with the superior genes triumph over the other variants (Bartosiewicz & Gál 2013:64). The remaining entities thus differ from their predecessors in that they have evolved.

In *The Chrysalids* (1955) evolution and the change of life forms are ultimately aided by the nuclear event that damaged the planet. Brians (1984:256) notes that in many science fiction novels of the fifties and sixties the atomic bomb comes to be seen as more benign. Brians (1984:256) continues to

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[56] Post-humanism, although not the focus of this study, is of relevance at this point. Post-humanism is a vast discourse, and although in many ways it seeks to challenge enlightenment thinking and dualism, it can still be linked to the aforementioned discourses (Cook 2004:1). Transhumanist philosophies posits, as its aims to speed up of human evolution through technology, to ultimately create a subject that is post-human (Terranova 1996:270). This notion is however informed by enlightenment thinking as it not only assumes that evolution moves towards a better form of the human, but also intends to further enlightenment ideals of progress. Progress is viewed here as progression up the evolutionary scale through the use of technology on one's own person.

qualify this by pointing out that one of the most common mutations across the board is telepathy, or *homo superior* telepaths.[57] This can also be applied to the telepaths in *The Chrysalids* (1955).[58]

Telepathy in *The Chrysalids* (Wyndham 1955) is presented as a mutation; a mutation that is a non-physical step forward in the evolution of the human race. This telepathic, *homo superior* is, however, undermined in *The Chrysalids* (Wyndham 1955) when, according to Poutanen (2007:34), the telepaths are forced to balance extraordinary mental abilities with ordinary bodies. One of the driving forces behind the narrative is the association of the physically deviant and inferior evolutionary bodies of the mutants with the superior, mentally evolved minds of the telepaths. This is a false classification, however, revealed through the fact that the idea of mutants and telepaths belonging to the same group is often challenged in the novel.[59]

Telepaths are accorded positive connotations in the novel principally because their mutation is of the mind rather than the body, which further suggests evolutionary progress. A contrast is thus created between the rational[60] telepaths, controlling their own natures and also external nature to some degree, and the mutants, powerless over both their inner nature and external forces of nature. This contrast highlights the emphasis placed on reason and the mind as the standard of what constitutes the worth and dignity of humanity; a view supported by Cartesian dualism. Because the mutants are limited by internal and external nature they are essentially the representatives of a Cartesian body; while the telepaths, standing above the vicissitudes of nature through reason, are essentially the representatives of a Cartesian mind.

Throughout *The Chrysalids* (Wyndham 1955) there is conflict between those who represent the evolution of the mind, the telepaths, and those who represent the evolution of the body, the mutants (particularly Sophie). This conflict is not unlike that of the conflict suggested in Cartesian substance

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[57] Stock (2011:216), which provides a much more recent interpretation of *The Chrysalids* (Wyndham), also notes Wyndham's preoccupation with the immergence of the *homo superior*.

[58] In general science fiction novels, telepathy is represented as the next logical step in human evolution, although this includes an evolution towards spirituality (Stone-Blackburn 1993:243). Telepathy was originally seen as associated with mysticism and the occult, falling outside of scientifically acceptable facts. In science fiction, however, telepathy often acts as a device to fuse science and religion, joining the mystic tradition with technological advances and the theory of evolution (Luckhurst 2005:135,136).

[59] Wyndham (1955) expresses in *The Chrysalids* that the mutants and telepaths are different. Emphasis is placed on the physical lack of deformity by the telepaths and that the mutants would shun them on account of this (Wyndham 1955:155). An example in *The Chrysalids* (Wyndham 1955:163) of emphasising the difference between the telepaths and mutants may be seen in Rosalind's response to Gordon's desire to use her as breeding stock. Rosalind's response reads as follows: 'He's a different kind. Not like us. Not the same sort at all. It would be outrageous-like an animal' (Wyndham 1955:172).

[60] Stock (2011:58-59) argues that the dystopia presented in *The Chrysalids* (Wyndham 1955) focuses on the individual telepath, David and his experiences within his dystopian world. It is noted by Stock (2011:58-59) that David and the telepaths do not present an alternative rationality to their world, but can affect their world through their subjectivity. Where the rationality of a grand narrative is applied, it is from the Sealand woman and her opinion of the telepaths as agents of evolutionary progress. David however takes issue with this in that he notes that they have a very high opinion of themselves (Wyndham 1955:146).

dualism in that these two distinct substances, the mind and the body, are established as metaphysical antipodes that cannot be reconciled.

This emphasis on the mind and its powers in *The Chrysalids* (Wyndham 1955)reflects the Cartesian primacy accorded to the mind over the body, and that it is only through reason that progress can be made. Levin (1977:251) states that *The Chrysalids* (Wyndham 1955) shows the highest value of human existence to be reason, a force which combats the blind forces of nature.

The emphasis on the rational mind as an objective measure of nature marks a shift in the conception of nature: through the rational mind nature is viewed as less organic, more deterministic, and mostly mechanical (Adorno & Horkheimer 1997:89). Nature is understood as a passive system wherein various parts exist (Lancaster University 2004:[sp]). From this perspective, then, the body is representative of nature, while the mind stands above nature and controls it.

The control and domination of nature, both in terms of the external (physical) world and our internal human impulses, becomes linked with the idea of progress (Seidler 1998:15). External nature can be understood as governed by external laws, implying that it can, and should be, controlled. The inner nature of human beings, our emotions and impulses, might also be said to be under the domain and control of the rational mind (Seidler 1998:15). Human beings are seen as in control of what they are through their reason; their inner natures have to be controlled and dominated in order for them to express themselves as rational beings (Clark 2002:230).

The above ideas are reflected in *The Chrysalids* (Wyndham 1955) wherein the telepathic characters become the epitome of mind and reason. Within the overtly religious society of Waknuk, a society in which reason is displaced by fear of the supernatural, the telepaths remain logical.[61] The telepaths form a strong group and soon realize that the community of Waknuk is dangerous because its members will accept nothing outside of their narrow worldview. A sharp contrast is created between the telepaths – harmless, reasonable children – and the dangerous, religiously fanatical inhabitants of Waknuk.

The telepaths are rational beings; through their reason they have better control of their own nature as well as external nature since they are able to better plan and escape from external dangers. The other people of Waknuk cannot control their own natures. Their emotions are by no means controlled, as

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[61] An example of the telepath's logical behaviour may be seen in various examples throughout *The Chrysalids* (Wyndham 1955), only a few of which are mentioned here. One such an example can be seen as Rosalind's logical conclusion that the telepaths will have to flee Waknuk and her subsequent thorough planning (Wyndham 1955:125). Throughout the duration of Petra, Rosalind and David's journey, they are aided by Michael who gives them tactical advice, an instance of which can be found on page 178 (Wyndham 1955). Furthermore the woman from Sealand, who represents the city of telepaths, is logical to the extreme, as she states in an unemotional way that normal people should die out since they are no more that "near sublime-animals" (Wyndham 1955:156).

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can be seen in their passionate hatred for mutations. In Waknuk, normal humans also have no control over external nature, which brings about mutations. Their understanding of external nature is also non-rational insofar as they perceive nature in terms of God's wrath instead of natural laws.

Mutants in *The Chrysalids* (Wyndham 1955) are posited as the least reasonable of all variations of humanity. Mutants are subject to external nature in an extreme way. Mutants in the Fringes cannot master nature to the extent where they could establish a sustainable stable society.[62] Their subjection to external nature is also evident in their mutated forms. They become the embodiment of the twisted and mutated post-apocalyptic world of *The Chrysalids* (Wyndham 1955).

One can thus conclude from the above that the logic of Cartesian dualism can be applied to *The Chrysalids* (Wyndham 1955). Wyndham's conception of Darwinian evolution further exemplifies the idea of Cartesian dualism insofar as evolution of the mind is deemed more important than that of the body. Telepaths, as representative of the mind, possess the capability to control both their internal and external nature, while the mutants, as representative of the body, possess no such control over nature.

2.7. *The Chrysalids*, Immersion and Virtual Reality

Throughout *The Chrysalids* (Wyndham 1955) certain ideas pertaining to the discourses surrounding virtual reality, immersion and embodiment are also present. Although the technological aspect of the virtual reality system is absent, the idea concerning the communication and interconnectivity of minds is present. It is also of interest to this study that the mutants, like Sophie, in *The Chrysalids* (Wyndham 1955) are excluded from the interconnectivity of the telepathic minds, much as the body is excluded from immersion into utopian-cyberspace (Nechvatal 2001:421). *The Chrysalids* (Wyndham 1955) does not deal with immersion into cyberspace and the abandonment of the body directly, mainly due to its socio-historic context. However, I argue that the novel is informed by notions of Cartesian embodiment and that similar utopian themes can be found in *The Chrysalids* (Wyndham 1955) and in the cyber-utopian myth attached to cyberspace.

One of the parallels between cyber-utopian thought and *The Chrysalids* (Wyndham 1955) concerns the notion of a virtual community as utopian, as represented by the mind-centred telepaths. In the 1950s, transcendence, as in the soul leaving the body for a better place, shifted away from Christian notions and was expressed in science fiction novels, specifically *The Chrysalids* (Wyndham 1955), through telepathy (Fitting 1979:64). Telepathy usually goes hand in hand with the belief that the improved mode of communication will involve more people more directly over a larger area and leave fewer chances for misinterpretation (Fitting 1983:235). The human condition could vastly be improved and a new utopian era would thus be attainable.

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[62] These mutants rely instead on the more developed Waknuk community, from which they obtain their food during desperate raids (Wyndham 1955:20).

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In *The Chrysalids* (Wyndham 1955) the community of telepaths is presented as an ideal community, much in the same way that virtual communities sometimes are. The telepaths are able to communicate over long distances.[63] Like a virtual community, distance is no longer a hindrance (Rheingold 1993:3). This is because the physical world, including geography as well as the body's limited range, is not inhibiting the mind.

The telepathic community is also seen as having more meaningful relationships than mutants/normal people. This is also one of the aims of creating communities in cyberspace (Wilbur 1997:48). The telepathic characters in *The Chrysalids* (Wyndham 1955), as in other science fiction stories, have an intimately linked community which is ultimately their strongest asset (Poutanen 2007:34). Like those who seek to be part of a virtual community, the telepathic community in *The Chrysalids* (Wyndham 1955) strive to obtain meaningful relationships missing in their everyday, physical, lives (Poutanen 2007:34).

Frequently in the narrative of *The Chrysalids* (Wyndham 1955) references are made to the importance of mental intimacy which does not involve the body directly. This is emphasised, for instance, in the idea that only telepaths should marry telepaths because of their unique mental connection (Wyndham 1955:95-96), and the meaningful mental connection between the main telepathic characters, Rosalind and David. Their minds are described as flowing together, mingling and blending mentally to create one being (Wyndham 1955:150). David even describes the body's love as being described by poets, but that these words fail the love of the mind clumsily (Wyndham 1955:150). The physicality of intimacy is thus seen as less important that mental intimacy.

Telepathy is often based, as cyberspace is, not only on inclusion but also exclusion (Kitchin 1998:400). The telepaths have access to a mind space where they can experience a nearly perfect community of minds. The mutants, however, have no access to this community of minds, much as bodies, according to Cartesian dualism, cannot enter cyberspace. The mutants thus focus on their physicality and cannot transcend their deformed bodies as telepaths can.

The Chrysalids (Wyndham 1955) explains how telepaths communicate and I argue that parallels can again be drawn to immersion and cyberspace. David instructs Petra, the youngest telepath, on how to communicate via thought. He tells her to close her eyes and concentrate on the image of a well. David creates a rabbit in the well Petra had envisioned (Wyndham 1955:112-114). Two characteristics that are evident in cyberspace are pertinent here, namely: immersion and interactivity.

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[63] Rosalind, David and Perta can communicate with Michael many miles away, being fed information from the inside of their pursuers' midst (Wyndham 1955:131). Perta can communicate with the Sealand woman all the way from Canada to New Zealand (Zubrycki 2004:285).

In the case of David and Petra the mind-space they are exploring is more easily accessed if sight, previously discussed as a main mediator of immersion (Grau 1999:365), is deprived of outside input. The created mind-space is not welcoming of the body's actual senses as with immersion into a virtual world via technological equipment. Similarly, the interactivity which occurs in this mind-space is mind-centred, and again mostly excludes the body.

Interactivity is a prerequisite for immersion (Nalbant & Bostan 2006:1). David and Petra, as well as the other telepaths in the community share a mind-space. Within this mind-space they can interact with each other separately or as a group. They send each other images, thoughts, feelings and impressions. The interactivity that promotes immersion can however be seen through Petra and David's thoughts actually affecting and changing the landscape of the mind-space.

Porush (1995:[sp]) states that cyberspace is exactly the technology to achieve something like telepathy. Telepathy and cyberspace thus both promote the same thing, namely: an evolution of consciousness, which may be viewed as conducive to human progress. What is of interest to this study is the fact that the mind is seen as able to become immersed or have telepathic ability and communicate, but the body is excluded from such communications. Telepathy and cyberspace thus both function within the hierarchy created by Cartesian dualism.

At the end of *The Chrysalids* (Wyndham 1955) the telepaths escape, whilst Sophie is killed along with other mutants and people from Waknuk. The telepaths are to join a technologically advanced society of telepaths. This society is revealed as the ideal community. Not only are they beyond physical strife, but also all share in a mental community. On approaching the city the telepaths use their minds to pick up on the thoughts from the current inhabitants, welcoming the telepaths to the new community (Wyndham 1955:200). I argue that the purpose of *The Chrysalids* (Wyndham 1955) is to separate the telepaths from their less worthy mutant counterparts. Without the inhibiting factors of the mutants and Waknuk people they can finally enter into a community that values the mind. This may be viewed as parallel to the Cartesian Dream which advocates that the mind alone should enter into cyberspace to interact with a utopian community (Boler 2007:139).

One can conclude this subsection by stating that telepathy in *The Chrysalids* (Wyndham 1955) holds to many of the same principals as virtual reality and cyberspace, particularly the idea of interconnected minds. In this regard, the exclusion of the body found in virtual reality parallels the exclusion of mutants, like Sophie, from the perfect community of the telepaths.

2.8. Comparison between Rosalind as the mind and Sophie as the body

A direct comparison is made in *The Chrysalids* (Wyndham 1955) between Sophie and Rosalind. Sophie is described in such a way that she appears inferior to Rosalind: the mind-centred telepath

(Rosalind) is placed as superior to the physically deformed mutant (Sophie). I argue in this subsection that the comparison between Rosalind and Sophie reinforces the hierarchy created by Cartesian dualism, as described by Hastrup and Hervik (1994:176). In the case of the mutant Sophie, her place in the hierarchy is associated more strongly with the body and is expressed through her direct confrontation with Rosalind, in Sophie's cave (Wyndham 1955:176-178).

In Sophie's cave there is a moment of tension between the two women. Rosalind's poise and beauty are emphasised whilst Sophie's aggression and unclothed form are described, creating a contrast between the women. Sophie's exposed flesh and anger, which later turns into emotional sobbing, connects her firmly with the body as opposed to the mind.

When the body is conceived of as exposed it holds many sexual connotations, all connected more with the physical flesh of the body than the mind (Balog 2013:6). According to Grosz (1994:4) the hierarchy created by separating the mind and body leads to a number of other dichotomies. The body is associated with such characteristics as nature, sensuality, sexuality and animalism. In opposition to this, the mind is able to stand outside of nature and the body, and is therefore capable of disciplining and controlling nature and the body (Dallmayr 2005:35). The rational mind thus triumphs over the non-rational emotion of the body.

Sophie exposed may be perceived as being animal-like, without covering and ruled by her passions, which further situates her in the category of body. Her exposed body is not subordinated to the dictates of her rational mind, as it should be according to Cartesian thinking (Bray & Colebrook 1998:48). Descartes writes on animals and human bodies and comes to the conclusion that human bodies are like animals (Skirry 2005:[sp]). Descartes envisages the body as a machine, a collection of parts that work together. Similarly, animals are described simply as intricate organic machines (Armstrong & Botzer 1993:281). What sets human beings and animals apart for Descartes is the fact that humans have the ability to think rationally because their bodies are inhabited by a mind (Skirry 2005:[sp]).

Animals are subject to their passions; they live through their bodily movements alone (Kemerling 2011: [sp]). When humans are subject to their passions, they are subjecting their reasonable minds to their bodies' will (Bennett 2010:38). It is thus of extreme importance to Descartes that even those who are exceptionally weak-minded should take control of their passions, associated with bodily wants and emotions, since they are reasoning beings (Bennett 2010:16). The body, a machine much like an animal, must be controlled as humans are thinking beings unlike animals.

Rosalind is considered to be smart and rational[64]; when she is compared to Sophie it becomes clear that Sophie embodies emotion, and excessive emotion at that.[65] Sophie's over-emotional reaction emphasises her status as object and association with body rather than mind. After Rosalind and Sophie are compared physically, the tension passes. Sophie then breaks down crying and flings herself into a dark corner where she sobs (Wyndham 1955:177). It is also during this crying spell that her physical deformity/mutation is mentioned again: her foot and its sixth toe are described as being "grubby" (Wyndham 1955:177).

The composite nature of the body is also aligned with Sophie and the mutants in *The Chrysalids* (Wyndham 1955). According to Alanen (1989:391) the Cartesian conception of the body is that it is simply a collection of randomly placed, separable parts, the rearrangement of which changes the body. In *The Chrysalids* (Wyndham 1955) the rearrangement of limbs occurs through mutation, emphasising the body as such a chance juxtaposition of limbs. The bodies of the mutants, including Sophie, emphasises their inferiority and also their alignment with the category of body.

Indivisibility as a characteristic of mind is also portrayed through the telepathic characters. When something is added to the mutant's bodies, it significantly physically changes them. Without the addition they would be normal, but the change of physicality designates them as mutants. This physical change allows them to be perceived as less than human. In contrast to this the mind of the telepaths are added to as well, but with vastly different results. The mind is conceived of as indivisible, not composed of separate parts, and is always a whole (Rozemond 2009:2). When something is added to it through evolution, it similarly forms part of the whole, not changing the essence of the self that is a rational thinking being. The telepaths in *The Chrysalids* (Wyndham 1955) are simply more mentally capable than any human variant before them. Rosalind is thus a representative of the unity of mental substance, whilst Sophie, with her extra toes represents the divisibility of the body as well as its fallibility.

Sophie's crying, is negatively described as "hopeless and abandoned sobbing." (Wyndham 1955:177). In contrast to this, Rosalind's demeanour is described as "contrite and appalled." (Wyndham 1955:177) at Sophie's reaction. Sophie's emotional reaction is overwhelming and physical; she cries and falls down. In contrast, Rosalind is in control of herself. She feels remorse, but does not voice it or share it through telepathic communication.

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[64] Rosalind realises that they are in danger in Waknuk and she thus starts preparing early on for them to leave (Wynham 1955:123). When the crucial moment arises they are able to escape because of Rosalind's plan, she also then berates David or not doing more thinking (Wynham 1955:125).

[65] Sophie is depicted as capable and strong for most of the narrative. As a child she bravely fight tears when her foot is hurt (Wynham 1955:9) and as an adult she calmly takes care of David. It is however when she feels looked down on by Rosalind that she breaks down (Wynham 1955:177).

Since Rosalind has a superior telepathic mind (Poutanen 2009:3), her purchase on the truth, which is emphasised by Cartesian thinking as obtained through the mind not the body (Schouls 2000:817), is a lot clearer than Sophie's. Sophie's understanding of the world is limited to what she can perceive with her fallible senses (LaBossiere 2009:[sp]). Sophie's body is what she relies on to understand the world. Rosalind, in contrast, has verified mental evidence from not only her own mind, but from that of others in the telepathic community concerning what is or is not true. An example of this may be seen in Sophie's belief that Gordon will no longer want her, as she is barren, and that the fertile Rosalind will replace her (McLeaish 2012:32).

Sophie's belief in being expendable shows her use of imagination and conjecture. Imagination is seen by Descartes as residing in the body (Lyons 2005:xii). Imagining, as Sophie is doing by imagining the outcome of events, thus has to do with the sense perception of her body. She must rely on her senses' previous experience of the world, which are not always accurate, in order to plot a course for the events she is perceiving (Lacewing [sa]:3). Imagination, in Cartesian terms, mediates between the mind and body, but is in itself weak cognitively (Sepper 1996:1). Descartes (2003 [1614]:108) further explains imagination to as an inessential part of the self. It follows that imagination, if it is not an essential part of the self or mind, can be cast off, like the body (Gary 2014:[sp]). Imagination, due to the fact that it can be removed from the self, forms part of that which is divisible.

Sophie's imagination aligns her with the divisible body, whilst Rosalind is aligned with the indivisible mind through understanding. Understanding stands apart from imagination. Understanding, unlike imagination, works with pure intellect (Sepper 1996:6). Rosalind makes use of her intellect to guide her to a logical conclusion, one not informed by imagination like Sophie's interpretation of events. Understanding is considered essential to the mind, it is not divisible or separable from the mind (Lacewing [sa]:2).

I conclude this subsection by asserting that the comparison between Sophie and Rosalind in *The Chrysalids* (Wyndham 1955) exemplifies the Cartesian split by positing Rosalind as the mind and Sophie as the body. Sophie and Rosalind are placed on a hierarchy with Rosalind as superior because of her rational mind as opposed to Sophie's emotional actions. Furthermore, Sophie was discussed as animal-like in her nudity and out of control, whereas Rosalind has been discussed as calm and in control of herself.

2.9. Conclusion

After first discussing Cartesian dualism as well as virtual reality, immersion and the myth of cyber-utopia and then applying these notions to *Wave UFO* (Mori 1999-2005) as well as *The Chrysalids* (Wyndham 1955) it can be concluded that Cartesian dualism is present in both these texts. The mind-

body split present in the discussed artwork, as well as novel, ties in with cyber-utopianism as both the artwork and literary text links utopianism to the mind at the expense of the body.

Cyber-utopianism, as it is connected to virtual reality and immersion can be seen in *Wave UFO* (Mori 1999-2005) in various ways. *Wave UFO* (Mori 1999-2005) aims to create an immersive experience through stimulating the participants with a virtual reality created by the projections of their brainwaves. The large projections and exclusion of other sensorial stimuli are meant to make the experience more immersive. This immersive experience can be seen as aiming to exclude the body as the interaction with the virtual world takes place through a brain-interface, a very intimate and less visible interface that does not rely on the larger parts of the body. Mori's conceptual motivations for creating *Wave UFO* (1999-2005) are viewed as utopian through her focus on the interconnectedness of the participants' minds.

Interconnectedness as it is associated with virtual-utopianism and the mind as opposed to the body is also resent in *The Chrysalids* (Wyndham 1955). Although *The Chrysalids* (Wyndham 1955) predates virtual reality, the mind-space used by the telepathic characters has characteristics similar to cyberspace, as well as utopian connections. Emphasis is placed in *The Chrysalids* (Wyndham 1955) on the superiority of telepathic communities and is shown at the end of the novel to be utopian. The telepathic community however consigns the highest order of value to the mind, excluding those that are not seen as mind-centred but rather connected with the body.

One such an excluded character, who is associated with the body, is the mutant Sophie Wender. As a mutant Sophie is shown as being inferior to telepaths as she is not the next step in human evolution, which the telepaths presented as. The telepaths are associated with reason and the mind, whereas mutants like Sophie are associated with the body and the passions. In a direct comparison between a telepath, Rosalind and a mutant, Sophie, it is made clear that the mind is regarded as being of higher importance.

Sophie as compared to Rosalind is shown as being inferior and associated with the body. Sophie's unclothed form and animalistic description links her with the physicality and irrationality of the body. Sophie is also depicted as being highly emotional which further links her with the passions of the body. Rosalind in contrast is described as being of a higher order through her rationality and control of her emotions. It can thus be concluded that Rosalind is deemed superior to Sophie, based on Sophie's close relationship with the body.

CHAPTER THREE: IMMERSION AND PHENOMENOLOGY IN RELATION TO EMBODIMENT, NEW MEDIA ART AND *THE CHRYSALIDS*.

3.1. Introduction

In this chapter I argue that through viewing embodiment from a phenomenological perspective the Cartesian mind-body dichotomy, as well as the utopian myths of a disembodied virtual utopia, are circumvented. I argue that in contrast to the Cartesian model of immersion,[66] phenomenology, as it pertains to embodiment, enables one to assess immersion and interaction with cyberspace in a contemporary, embodied, and non-utopian setting. I further posit that through the discourse of phenomenology, immersion is only possible through the body and that the body cannot be separated from an immersive experience.

The aim in this chapter is to present an alternative view of embodiment, one which does not function in a dualistic manner. As stated above, embodiment is investigated here from a phenomenological perspective, drawing mainly on the theories of the twentieth-century phenomenological philosopher Maurice Merleau-Ponty.[67] The intention in this section is to explore an extended conception of immersion into cyberspace or virtual reality through new media art.

Moreover, *The Chrysalids* (Wyndham 1955) is discussed from a phenomenological point of view. This is done since my own work, *The Body of Sophie* (Le Roux 2015-2016) considers Sophie as a subject.[68] Embodiment and immersion from a phenomenological perspective is further examined through the contemporary interactive new media art work of Lozano-Hemmer, titled *Under Scan* (2005-2008) (Figure 4, 10-12 & 19) as well as Minnette Vári's *Chimera* (2001) (Figure 2, 3, 15 & 20-22). Both *Under Scan* (Lozano-Hemmer 2005-2008) and *Chimera* (Vári 2001) place emphasis on the body and the senses.

The Chrysalids (Wyndham 1955) endorses Cartesian dualism[69], but is discussed here within a phenomenological framework. Parallels and comparisons are drawn between the telepathic characters of *The Chrysalids* (Wyndham 1955) and the mutated character Sophie, which prompts the reassessment of immersion into virtual reality from a phenomenological perspective, concerning embodiment, rather than that of Cartesian dualism.

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[66] As discussed in chapter two: *Immersion and Cartesian Dualism in Relation to* Wave UFO *and* The Chrysalids (22-48). Particular reference is made to immersion and Cartesian dualism in the subsection titled, 2.3. *Immersion, virtual reality and Cartesian dualism* (28-29).

[67] The relevance of a discussion of embodiment via phenomenology is further discussed in chapter four: *Sacrifice and The Body in Virtual Reality: The Body as Victim in New Media Art and* The Chrysalids (75-115), where phenomenology is applied within the discourse of sacrifice.

[68] Sophie's subjecthood in my body of work is a matter that is elaborated on in the exhibition catalogue.

[69] This is referred to in chapter two: *Immersion and Cartesian Dualism in Relation to* Wave UFO *and* The Chrysalids (22-48). The subchapter: 2.6. *Cartesian Dualism and* The Chrysalids (37-42), focuses on this specifically.

3.2. The phenomenology of Merleau-Ponty

The focus of this section is phenomenology, particularly Merleau-Ponty's interpretation of the discourse. It is essential to provide an overview of Merleau-Ponty's main notions concerning phenomenological embodiment to understand the context of my problem statement. These points include the notions that the body and mind are dependent on one another and that the subject exists in an embodied state in a world that preceded him/her (Simpson 2014:12). Merleau-Ponty's argument against Cartesian dualism as well as dualistic thinking in general is provided in the following discussion.

Merleau-Ponty counters the Cartesian split in numerous ways. According to Merleau-Ponty, the body and mind, contrary to the Cartesian mind-body dichotomy, are inseparable (Ozawa-De Silva 2002:30).Simply stated, living human beings are always already embodied. This embodied state is also in the world and thus in constant interaction with the world (Mangen 2008:408). Phenomenology does not focus on an escape from the world and embodiment or an idealized sate of being elsewhere, but instead focuses on "being in the world" (Merleau-Ponty 2005 [1945]:xiv).

Cartesian dualism suggests that the self, or subject, is separate from the body, which is merely an object in extended space, and that one can have an objective view of the body and also the world (Moore & Robinson 2015:5). In contrast, the phenomenological view concerns the fact that one is always already in the world, a world that preceded the individual and his/her perceptions. Merleau-Ponty (2005 [1945]:19) explains that the world, or lived world, is the backdrop to all human experience and that the mind arises through the body's immersion in the world. There is a progression that occurs, namely the world first, wherein the subject is embodied and then the mind, which it irrevocably linked to the body (Gallese & Cuccio 2015:7). The mind's content can only ever come from the world via the body, since it can interact with the world and gain experiences from it (Berman 2014:53). According to this logic, the world of lived human experiences and perception cannot be a product of a subjective, separate, mind which stands somehow in isolation from the body. Keat (2013:1) reiterates this point by stating that Merleau-Ponty's phenomenology overturns Cartesian dualism by positing the *cogito* as inexorably linked to the body which always already exists in the world.

Meaning, according to Merleau-Ponty (2005 [1945]:64), is generated in the world through an embodied being's "being-in-the-world".[70] On this view, the body does not hamper meaning, but in fact facilitates it (Blanchard & Øberg 2015:1). The capacities of the human body, especially the senses, can thus grant the embodied person access to the meaningful arrangement of the world due to

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[70] A term originally used by Martin Heidegger to indicate the coexistence of humanity and the world as opposed to a subject-object dichotomy between the two (Pulido 2010:27). See also Heidegger's *Being and Time,* Division I, Chapter II (Heidegger *Being and Time* REF in Bibliography).

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the body's situatedness in the world. The mind is thus never separate from the body as it relies on the body for the meaningful interpretation of the world. This immediate interaction between the body and the world is precisely an expression of embodiment (Farman 2012:26).

Embodiment can also be articulated through interaction with virtual worlds and cyberspace. One's bodily senses can be viewed as determining embodiment. Immersion, as previously mentioned, relies on the senses in order to create an immersive experience (Ermi & Mäyrä 2002:10). According to the phenomenological view, a person cannot become disembodied because the sensory input from the body facilitates immersion (Smith, Marsh, Duke & Wright 1998:1). The world and the embodied subject are so intimately connected that Merleau-Ponty (1968:248) writes "my body is made of the same flesh as the world". All experience comes from the world, even science which claims an objective view of the world, is based on an individual's experiences of the world (Flynn 2004:[sp]). For Merleau-Ponty, all beings always live *towards*[71] the world through their embodied experiences (Küpers 2015:32).

Toadvine and Lawlor (2007:330) explain that Merleau-Ponty indicates that the lived experience of a person does not include pure objects, but that there is a perceiving subject. This perceiving subject is in a direct and immediate relation with the world. This is a pre-subject or a natural subject who exists through that which binds it to the world: the body (Madison 1981:20).[72]

Understanding perception requires the exploration of the pre-subjective within human beings. The body may be viewed as this pre-subject as it exists as a subject "beneath" one's consciousness (Hung [sa]:3). This pre-subject exists and is in contact with the world, marking out an individual's place within it (Merleau-Ponty 2005 [1945]:294). This indicates that the body is also a kind of subject, or rather a "body-subject" (Keat 2013:8). In order to better understand the body-subject in a way that does not place the mind and body as separate, but as connected in a way where neither is an object, the relation of the body and world needs to be explained.

Merleau-Ponty asserts that human beings should come to understand the importance of their worldly existence in accordance with three levels of interaction with the world (Simpson 2014:12). These levels are interrelated and dependent on each other: the physical, the living, and the mental (Simpson 2014:12). The first order is the physical order, the body as physical and concrete in a physical world (Merleau-Ponty 2005 [1945]:237). The second order is that of the living world, the body as a living thing that is alive by virtue of its interaction with the world in a way that is meaningful (Merleau-

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[71] Living towards the world implies that the body exists in the world and that all experience takes place therein and that one thus lives in relation to and towards the physical, lived world (Merleau-Ponty 2005 [1945]:87).

[72] This can also be related to the pre-cogito/ pre-reflexive cogito. The pre-cogito is the notion that there is a self that exits before language and thought and that (Reynolds 2015:[sp]). The pre-reflexive cogito also concerns the conception and experiences of the lived world. It takes as starting point that one has some understanding of the world that is not mediated solely by the mind (Merleau-Ponty 2005 [1945]:347).

Ponty 1967 [1942]:147). Third is the order of the mind, which features a distinctly social dimension as humans always exist in relation to other human beings in the world (Simpson 2014:13). The order of the mind is that of subjectivity, but it represents the human body as "a node in a network of intersubjectivity" (Simpson 2014:13). These orders are unlike the Cartesian difference of substances that are wholly separate; instead the three levels may be seen as different ways of being embodied in the world.

The three levels can be seen as higher (mind) and lower (physical), but they are not independent of each other. Instead, although the higher surpasses the lower, it is dependent on the lower and cannot be separated from it (Merleau-Ponty 1967 [1942]:xii). They are dependent on each other and describe our embodied being-in-the-world (Merleau-Ponty 2005 [1945]:146-147). The higher (mind) is supported by the lower (physical) as it emerges from it; it also remains relative to it, but also retains its difference from it (Merleau-Ponty 1967 [1942]:125).[73] The body can be seen as arising from the world while the mind arises from the body. On this view, the mind is both constructed by, and in turn helps to change, the body (Merleau-Ponty 2005 [1945]:167). Through the body, the mind can have an effect on the world even as it is being affected by the world through the physical form of the body, particularly via sense perception.

Following this phenomenological argument, it becomes apparent that the mind and body are intimately connected and both dependent on the perceived world. Merleau-Ponty (2004 [1948]:85) thus posits that human beings are a body *with* a mind instead of a body in addition to a separate mind. The binary dualism of body and mind is thus subverted as the dependency of the mind on matter is pointed out. According to Moran (2000:432) the interconnectedness and dependency of the living body and mind on the world causes the body not to be viewed as an object, but as part of the subject. One *is* one's body, for the subject extends to the body and does not exclude it or exist in separation from it (Merleau-Ponty 2005 [1945]:231). This body-subject participates in the notions of the subject *and* object, but it is presented as a state of being that is not identical with the dualistic and strictly hierarchical ideas of the traditional subject-object model, as espoused by Descartes (Townsley 1979:82).

For Merleau-Ponty, a human being is a subject that is embodied through the many bonds which ties the body and mind together within the world (Madison 1981:22). The phenomenological body is irreducible to its parts, and is always already implicated in the world; it is a living whole within a living world (Simpson 2014:25). This whole is not simply a collection of parts or biological processes; an idea which runs contrary to the mechanistic view Descartes provides of the divisible

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[73] This is explained as *Fundierung* by Merleau-Ponty (1967 [1942]:180). *Fundiering* is a model described by Merleau-Ponty (1967 [1942]:180) which explains the relationship between the world, body and mind. Hope (2013:[sp]) describes *Fundiering* as the self's sedimentation in a communal world of shared experiences, but that the self's interpretation and reactions can be seen as emanating from the experienced or perceived world.

body (Rozemond 2003:347). Rather, on the phenomenological view, the whole, living organism in-the-world is dependent on its founding parts, with which it stands in a reciprocal relationship (Merleau-Ponty 2004 [1948]:29).

Moreover, the living body can be described as the "place of behaviour" insofar as the organization of a living body determines the behaviour of an organism (Simpson 2014:26). If the organisation of the whole is changed, or the body is damaged, then the behaviour of the body also changes, and other limbs work harder to compensate for the damage (Romdenh-Romluc 2012:106). Since the body is understood in Merleau-Ponty's phenomenology as a subject, this change in behaviour affects the subject that is also the mind, since the mind-subject is highly dependent on the body-subject. The way in which the subject now experiences the world has changed. This is in opposition to Descartes's notion that subtracting from the divisible body changes only the body and not the mind-subject (Lacewing [sa]:2).

There is cohesion between the organism's different parts just as there is cohesion between the organism and the world (Rosenthal & Bourgeois 1991:68). A human body, if the human is understood as an organism, is thus not simply an object, but rather its relation to the world makes it a subject. Furthermore, human consciousness, or mind, is part of a circuit which includes the living body and is affected by the behaviour of that organism (Crossley 2012:95).

The behaviour of an organism is also dependent on its situatedness in-the-world. An organism can be better understood when one takes into consideration that which it reacts against and that which acts upon it (Romdenh-Romluc 2012:106). Things in the world are not necessarily perceived as just objects by the body-subject. The worldly phenomena and/or entities to which an organism responds are things onto which it has projected certain values and meanings in relation to its needs and desires (Romdenh-Romluc 2012:106). The environment of the organism is thus also changed by the organism through this process just as it is changed and shaped by its environment.

The implications of these aspects of embodiment are noteworthy. To be human is not simply to add a cognitive dimension, or mind, to that which is often interpreted as animal, namely the body. To be human is another way of "being a body" (Bullington 2013:25). The human is described by Merleau-Ponty (1967 [1942]:64), as being both more than human, but also less than human. People are less than human since they are living organisms in the world just like all other living organisms in the world (Simpson 2014:29). When compared to other living organisms as being less than human it is important to note that humans are not viewed as disembodied minds, but as beings that are finite like all others (Simpson 2014:29).

Just like all beings, humans are born into the pre-existing, primordial world, but humans are aware of that world and perform meaningful actions within it (Pulido 2010:26). Even though humans stand in

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this intimate relationship with the world, they are not wholly defined or constituted by it, since humans fashion their own environments, as well as meet and challenge obstacles faced therein (Giorgi 2005:79). In this way people are more human than an animalistic body. Humans stand in a constant continuity with the world and are not alien to it even if they change it or strive to overcome its obstacles (Kampits 1983:289). Ultimately, then, human beings do not exist over against an external world but form part of it through an embodied subjectivity which encompasses both the mind and the body in a relationship of reciprocity and dependency.

A number of perceptions can be gleaned from the above phenomenological insights. This subsection has considered embodiment as per the phenomenology of Merleau-Ponty, with particular emphasis on challenging Cartesian dualism. Merleau-Ponty presents the body and mind as fundamentally inseparable, describing both as dependent on a world from which both body and mind arise. The body is not simply considered an object, but as a body-subject due to the interrelated nature of the body, mind, and world (Merleau-Ponty 2005 [1945]:231). Moreover, all that the body experiences with the mind originates and is dependent on the world, and this would include experiences with new media artworks, such as *Under Scan* (Lozano-Hemmer 2005-2008), as well as *Chimera* (Vári 2001), and also pertains directly to the discourse on virtual reality and immersion. Thus human interaction with the world and technology can be reassessed in accordance with the abovementioned phenomenological conception of embodiment.

3.3. Phenomenology, virtual reality and immersion

Immersion into virtual reality and cyberspace is considered here in from a phenomenological point of view, as far as phenomenology is concerned with embodiment. It is argued that immersion, as per the notion of a virtual utopia, aims to circumvent the body, but is in fact reliant on the body. I argue here that instead of circumventing the body through immersion, technologies like virtual reality rather extend the body as per the view of Marshall McLuhan (1967:74).

Immersion, as previously discussed, is inextricably tied to the senses, but still places them below the mind. When approaching immersion from a phenomenological perspective, the senses must however be considered as paramount, since they allow interaction with the virtual and real world (Smith *et al*. 1998:2). In the case of virtual reality, the senses thus grant access to the constructed world of cyberspace. Immersion, when seen as functioning in accordance with Cartesian ideals, denies the body's place in interactive immersive experiences. However, without including the body, and especially the senses, as part of meaning-making, immersion is simply not possible (Morie [sa]:7).

Murray (2000:4) argues that virtual reality wishes to substitute the lived, phenomenological body for a virtual body that is dependent on the mind alone. It is further argued by Murray (2000:4) that this virtual body, although dependent on the mind, is still experienced by the physical body and is open to

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the subjective experiences of that body. In order to make sense of any input concerning the virtual environment, the participant has to refer back to previous lived experiences. Lived experiences are highly subjective and concern the individual (Brown & Cordan 2009:61). Even immersion, which aims to be disembodying, can be read as an expression of embodiment since the body's lived experiences, are still used to interact with the virtual world and thus cannot be disregarded.

The immersive experience of the virtual world, although it is not the so-called real world, still affects the person involved. This is because the experience is an embodied experience, inasmuch as who the person is and how they view themselves in relation to others and the world is dependent on their bodies (Mehling, Wrubel, Daubenmier, Price, Kerr, Silow, Gopisetty & Stewart 2011:10). The virtual world effects the person who experiences it through their bodies as the thoughts and feelings associated with this experience is dependent on the body and mind (Morie [sa]:7). If one considers immersion not as a negation of the body but as an acknowledgement of the lived body, then what immersion implies for the lived body becomes important.

Ryan (1999:117) explains that when the phenomenological body interacts with sensory stimuli from a created world, the body's senses are extended. The technology accompanied by virtual reality simulators and new media artworks become extensions of the physical body, which in turn extends the senses and perception of a person (Low 2001:9). The lived experience of the body is thus broadened by technology, not hampered by, or excluded from it. This falls into Marshall McLuhan (1967:74)'s theories regarding phenomenology and the extension of the senses through technology.

McLuhan (1967:74) explains that human faculties are extended by media in either a psychic or physical way. Specific media also targets specific human senses and abilities; virtual reality aims to include as many senses and abilities as possible to create an immersive effect. Dery (1996:578) states that with media like virtual reality the nerves of a human being are experienced outside or beyond their regular limit; the skin and brain are experienced as being outside or beyond the skull. In this sense, one might say that new human beings have been created by new mediums of communication and experience, such as virtual reality.

Moreover, the lived body is dependent on a specific arrangement of sensory perception which enables it to interact with the world in a particular way (Smith *et al.* 1998:2). The body-subject's relationship and understanding of the world thus changes when the arrangement of the sensory perceptions is altered. Media privileges one sense above the other, overextending it and thus changing the way a person perceives their lived world (McLuhan 2011 [1962]:47). According to McLuhan (2001 [1964]:6) the body-image can be extended through the use of tools: the nervous system is supplemented by electronics and consciousness is expanded through the computer.

Klugman (2001:39) also states that the bodily boundary can be extended. When the boundaries of the body are extended to include tools that enhance the body and bodily perception, which in turn enhances consciousness, the extension may become part of the body-image. The body-image is separable from the body-schema however. Merleau-Ponty (2005 [1945]:113) notes that the body-image is based on a visually-informed understanding of the body, focusing only on the physical body. The body-schema however arises from an embodied point of view concerning the experience of the active lived body, which includes its internal perspective as well as the world with which the living body can interact (Hansen 2006:39). The body-image designates the body as an object, a container, while the body-schema, although present on a preconscious level, are the habits of the body which stand in relation to the environment and often informs conscious acts (Gallager & Cole 1995:371).

Merleau-Ponty (2005 [1945]:99) further explains the body-schema to be that which does not only include experience, but is also anterior to experience and makes possible the act of association in daily life. The phenomenal body-subject thus, as a body-schema, is that which goes before, or ahead of, and informs the body-image and the understanding of the objective domain (Hansen 2006:41). The body-schema is ultimately described by Merleau-Ponty (2005 [1945]:146) as a "general medium for having a world".

The body-schema is however subject to habit and can change according to the appropriation of prosthesis, like tools, which change the body-schema. McLuhan's notion that media extends the senses are more proper to a change in the body-schema. That which forms a part of the body-schema is supplemented though the prosthesis of media which takes the functions of the body and amplifies them through by translating it into an artefact (Brey 2000:3). Gil (1998:21) explains that the body "turns onto" things as the body incorporates things and is in turn incorporated into things, resulting in a blurring between the boundary of the body and the prosthesis or tool. This suggests that the bodily boundary might become blurred when immersed into virtual reality, but the body does not disappear altogether since it forms part of our experience of the virtual.

The above subsection had discussed immersion into virtual reality and cyberspace from a phenomenological perspective, including McLuhan (2001 [1964]:6)'s view of the body as being extended through media. It was found that virtual reality alters the body-schema and extends the body's senses. Following this discussion, it can be concluded that immersion may be viewed as an embodied experience rather than a disembodying experience, because it makes use of the physical body as well as drawing on the body-subject's experiences in the real world.

3.4. Phenomenology, virtual reality and immersion as applied to *Chimera* and *Under Scan*

In this subsection, embodiment as it relates to phenomenology and the discourses of immersion and virtual reality within the new media artworks *Under Scan* (Lozano-Hemmer 2005-2008) (Figure 4,

10-12 & 19), *Chimera* (Vári 2001) (Figure 2, 3, 15 & 20-22), and *Wave UFO* (Mori 1999-2005) (Figure 1, 6-9, 14 & 16-18) is discussed. Emphasis is placed on the position the body is afforded in the abovementioned artworks. It is argued here that *Under Scan* (Lozano-Hemmer 2005-2008) and *Chimera* (Vári 2001) actively aim to include the body as subject through such techniques as augmented reality. A discussion of *Wave UFO* (Mori 1999-2005) then follows, where it is argued that even though *Wave UFO* (Mori 1999-2005) aims to be more immersive than *Under Scan* (Lozano-Hemmer 2005-2008) or *Chimera* (Vári 2001), it still involves the physical body.

The extension of the body's senses through technology as opposed to the disembodiment preferred by traditional dualistic thinking on immersion can be seen in the works of Mexican based artist Raphael Lozano-Hemmer. Lozano-Hemmer's new media artworks generally incorporate technologies that allow interactivity. These technologies include, but are not limited to, telematics networks, robotics and surveillance equipment (Lozano-Hemmer 2013:[sp]). Often included in Lozano-Hemmer's art are bodies, architectures, and real spaces overlapping with virtual spaces, as can be seen in Figure 4, 10, 12 and 19 (Stern 2013:17).

Lozano-Hemmer's work makes use of public spaces, but places emphasis on the individual's interaction with the provided sensory data (Kilch & Scheer 2012:167). The individual is encouraged to relate to things in a new way through the change in behaviour accorded by the artwork (Stern 2008:31). This change in behaviour, through interaction, is also meant to encourage immersion. The physical body, however, remains a prominent component of the artwork (Her & Hamlyn 2010:[sp]). Kay (2013:3) explains that Lozano-Hemmer's artwork often aims to 'open' the body of the participant, as the artist aims to create an awareness of other people and places through interaction with the virtual and the real world. People actively interacting with the video portraits in *Under Scan* (Lozano-Hemmer 2005-2008) can be seen in Figure 4, 10 & 19.

A work that is of particular interest to this study is Lozano-Hemmer's *Under Scan* (2005-2008), which, I argue, emphasizes the body as subject along phenomenological lines. This large-scale piece was installed in Trafalgar Square, London, United Kingdom[74] (Kilch & Scheer 2012:170). It consists of various projected portraits, taken of individuals from Nottingham, Derby, Leicester, Northampton and Lincoln (BBC 2005:[sp]) as seen in Figure 11. There is also a strong light source, tracking systems, computers and various projectors (Avram [sa]:1). At first nothing is visible of the artwork except the strong light which allows prominent shadows to be cast by the participating pedestrians (Ravetto-Biagioli 2010:124). Within the shadows of the participants, moving portraits are projected with the help of a custom-built tracking system (Ravetto-Biagioli 2010:124). An example of a video portrait in the shadow of a participant is shown below.

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[74] This artwork was installed at the Viennese biennale in 2007 (Ravetto-Biagioli 2010:123). Between 2005 and 2008 this artwork was installed at Lincoln, Leicester, Northhampton, Derby, Nottingham and Trafalgar Square (Bounegru 2009:203).

Figure 10: Rafael Lozano-Hemmer, *Under Scan*. 2005-2008. Digital media, Variable. (Illuminations Media 2008:[sp]).

The portraits are ethnically diverse and respond to the movement of the passersby. An example of the portraits' diversity can be seen in Figure 11. When a pedestrian leaves the proximity of a portrait it 'responds' through disappearing after looking away (Kilch & Scheer 2012:169). The projection itself starts off with a person in a sleeping position where after the person in the portrait makes eye contact with the camera, which later creates the illusion of making eye contact with the participants (Ravetto-Biagioli 2010:124). These short performances are of varying length (Ravetto-Biagioli 2010:124). In Figure 11, stills from the various video portraits used in *Under Scan* (Lozano-Hemmer 2005-2008) can be seen as used again in another art work of Lozano-Hemmer, entitled *Eye Contact* (2006) (Art Cat 2006:[sp]).

Figure 11: Rafael Lozano-Hemmer, *Eye Contact*. 2006. Digital media, Variable. (Art Cat 2006:[sp]).

As a video installation piece, *Under Scan* (Lozano-Hemmer 2005-2008) is not as interactive as Lozano-Hemmer's other works, such as *Body Movies* (2001).[75] *Under Scan* (Lozano-Hemmer 2005-2008) focuses on the pedestrian's interaction with the video portraits. The body's finer movements are not responded to, only the act of being present and then leaving activates the portraits (Bounegru 2009:204) (Figure 4, 12 & 19). Even though *Under Scan* (Lozano-Hemmer 2005-2008) excludes certain aspects of the body, the work is still dependent on the embodied subject and draws attention to the body rather than excluding and disregarding it as is the case with artworks that strive for total immersion.

In the case of total immersion, where there is a focus on leaving the body behind, the participant is presented with a virtual body (Benford, Greenhalgh, Reynard, Brown & Koleva 1998:191). At first this substitute virtual body appears to be present in *Under Scan* (Lozano-Hemmer 2005-2008) as well. Bounegru (2009:202) describes the shadows used in Lozano-Hemmer's work, including *Under Scan* (Lozano-Hemmer 2005-2008), as an interface of "tele-absence". This, according to Bounegru (2009:202), concerns shadows as presenting a space that is devoid of identity which creates an interface between oneself and the projected image, allowing one to embody the projected body. Bounegru (2009:202) is, however, of the opinion that the shadow of an individual does not stand for disembodiment alone, but that it helps to co-create the artwork and allow the participant to become re-embodied.

The virtual body of another is presented to the participant, but that virtual body is only accessible through the physical body[76]. This can be seen in Figure 12, which shows the physical interaction of the participant with a video portrait. The body's shadow, even if it presents a lacuna of subjecthood, cannot exist without the physical body interacting with real space in the physical world. The virtual body may be dependent on the absence of the body, that is the shadow, yet it is also dependent on the real body being in the space within which the artwork is taking place.

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[75] *Body Movies* (2001) is a large public installation (International Database for Virtual Art 2011:[sp]). *Body Movies* (2001) consists of more than a thousand portraits which are projected onto the Pathé Cinema's façade through the use of projectors, which were controlled by robotics and placed around the square on towers (Ravetto-Biagioli 2010:140). The portraits could be seen when people interacted with the space, through moving through it, their shadows revealed the portraits (Lozano-Hemmer 2013:[sp]).

[76] The notion of a recorded body is discussed in relation to my practical artwork in the catalogue, *The Body of Sophie* (Le Roux 2016), on page 54.

Figure 12: Rafael Lozano-Hemmer, *Under Scan*. 2005-2008. Digital media, Variable.(BBC 2008:[sp]).

Dependency on the physical body is acknowledged by artworks such as *Under Scan* (Lozano-Hemmer 2005-2008) since it aims to include the body within a real space as shown in Figure 4, 10, 12 and 19. More immersive artworks, such as *Wave UFO* (Mori 1999-2005) can be read from a Cartesian perspective as aiming to exclude the body. From a phenomenological approach, however, it becomes apparent that even an artwork as immersive as *Wave UFO* (Mori 1999-2005) is still dependent on the physical body, just as *Under Scan* (Lozano-Hemmer 2005-2008) is.

Mori's work, *Wave UFO* (Mori 1999-2005), aims to facilitate a split between the body and mind, but it does not draw a distinction between the mind and the brain. What is neglected by a Cartesian reading of this process is that it is the physical organ of the brain that is used to stimulate immersion.

According to the thinking behind Cartesian dualism, the brain and mind are also viewed as separate (Gabbard 2000:117). The mind is a non-physical substance, while the brain, as part of the body, is a physical, separate substance. The mind is viewed as synonymous with the soul, in other words that which is absent after death, while the brain is part of the physical substance that remains and decays

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(Graves 2008 [1988]:6). However, what is demonstrated through Mori's *Wave UFO* (1999-2005) is not the separation of the body and mind, but instead the intimate relationship between them.

Merleau-Ponty's explanation of the mind arising from the body (Leitan & Murray 2014:[sp]), including the brain, can be seen in Mori's *Wave UFO* (1999-2005) insofar as the mind may be interpreted as participating in the artwork, but only through the body from which it has arisen and to which it is intimately connected. The EEG monitors still have to be attached to the physical head of a participant, which is shown in Figure 9 and 14, and this entails monitoring the activities of the physical brain and using the capabilities of the physical eyes.

The other senses of the body in *Wave UFO* (Mori 1999-2005) are similarly called upon to participate in the artwork. The imagery that is shown to the viewers, although only focusing on the eyes and brain, recall sense experiences from other senses. The rendered textures and shapes, although only represented virtually, draw on the participants' lived perceptual experiences.

Mori aims to create an immersive effect through isolating participants from outside stimuli. However, the individual participants' memories cannot be excluded. Such memories include sense perception from which certain understandings of the phenomenological world arise. In order to make sense of the immersive experience, it must refer back to their understanding of concepts and visuals, which are heavily influenced by embodied experiences (Merleau-Ponty 2005 [1945]:24).

Whereas Mori in *Wave UFO* (1999-2005) aims to detach viewers from their circumstances and present them with an alternative world, through such projections of *Connected World* (Mori 1999-2005) as well as the brainwave creations (Pinchuk Art Centre 2012:[3]). The utopian notions connected to immersive artworks which aim to exclude the body are circumvented through *Under Scan*'s (Lozano-Hemmer 2005-2008) focus on real spaces and real people in real time.

Under Scan (Lozano-Hemmer 2005-2008), like many of Lozano-Hemmer's other works[77], is site specific. The goal of such works, including *Under Scan* (Lozano-Hemmer 2005-2008), is, according to Adriaanses and Brouwer (2002:147), to draw attention to spaces that have become part of the everyday. By placing an installation in a well-known public space, Lozano-Hemmer aims to create a new and previously unfamiliar experience of that space (Bounegru 2009:209). The emphasis lies not in the experience of an alternate utopian world, but in re-connecting with the existing world through technology. In this way, artworks like *Under Scan* (Lozano-Hemmer 2005-2008), may be viewed as phenomenological in nature, for as Merleau-Ponty (2005 [1945]:xv) explains, Phenomenology entails

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[77] These works of Lozano-Hemmer include, but are not limited to: *Pulse Corniche* (2015), *Voice Tunnel* (2013), *Airborne* (2013), *Open Air* (2012), *Articulated Intersect* (2011), *Sandbox* (2010), *Solar Equation* (2010), *Voz Alta* (2008), *Pulse Park* (2008), *Pulse Front* (2007), *Sitestepper* (2004), *Frequency and Volume* (2003), *Amodal Suspension* (2003), *Two Orginens* (2002), *Body Movies* (2001), *33 Questions per Minute* (2000), *Vectoral Elevation* (1999), *Re:Positioning Fear* (1997) and *Displaced Emperors* (1997) (Lozano-Hemmer 2015:[sp]).

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a new found awareness of the world, and even allows one to become enamoured of the world as it is revealed to us in its phenomenal nature. *Under Scan* (Lozano-Hemmer 2005-2008) does just that as it draws attention to an everyday public space in which people might not ordinarily interact on a personal level.

Interaction within such a real space also emphasizes the phenomenological notion that experience in the world is relational and takes place in relation to others with whom one shares a world of perception and meaningful experience (Merleau-Ponty 2005 [1945]:xiii). The phenomenological approach allows people to view others as standing in relation to themselves and others, but also allows them to consider how individuals stand in relation to the lived world (Baldwin 2004:26). As *Under Scan* (Lozano-Hemmer 2005-2008) takes place in a public space, the experience of individuals with that space is focused upon, but also individuals' experience of others within that space. This can be seen by the coming together of individuals in Figure 4, 10 and 19.

A way in which Lozano-Hemmer's artworks concern the viewer' experiences, is through its creation of a performance through the viewer's physical participation[78]. This performing participation, according to Ridgway and Stern (2009:129), is rooted in the body and the bodily experiences: the body as physical becomes part of the artwork. It is however not just one participant whose body is involved, but many. The performance is thus shared by digital bodies and various physical bodies simultaneously (Figure 4, 12 & 19).

Those who are physically present and involved in the art piece are meant to become aware that they are being watched through surveillance equipment, but also by others in the same space (Ravetto-Biagioli 2010:128). In this specific sense, the artwork facilitates a shared experience. The willingness to connect with others is also employed by *Under Scan* (Lozano-Hemmer 2005-2008) insofar as it is the curiosity towards another being that prompts the interaction with other digital bodies. This idea is demonstrated in the coming together of people in Figure 19.

It is an intimate and almost confrontational experience to encounter such a performing digital body. Kaplani (2015:[sp]) states that Lozano-Hemmer aims to make participants lose the anonymity they often enjoy in public spaces, including online activities. An encounter with a digital body in a public space in such a personal way may force the participant to lose the aforementioned sense of anonymity. The digital portraits force the participant to regard their surroundings anew. This is unlike the more traditional dualistic notion of immersion that presents a digital body as a way of escaping present physical conditions into a utopian state (Ducheneaut, Wen, Yee & Wadley 2009:1156).

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[78] Performance and how it applies to my body of work is discussed in the catalogue, *The Body of Sophie* (Le Roux 2016:49,51).

A way in which Lozano-Hemmer places focus on the body is by means of a mixed reality, instead of a purely virtual reality. Mixed reality can be described as the bringing together and mingling of the virtual and the real. An offshoot of mixed reality that is most frequently encountered is augmented reality (Milgram, Takemura, Utsumi, & Kishino 1994:283). Augmented reality, as is the case in *Under Scan* (Lozano-Hemmer 2005-2008), is when a real space or event is changed or elaborated upon through the use of computer-based graphics (Milgram *et al.* 1994:283). In the case of *Under Scan* (Lozano-Hemmer 2005-2008) this would pertain to the augmentation of the public area with the projections of digital bodies onto that space (Figure 4, 10, 12 & 19). Mixed reality is of interest to this study because it includes the physical space and often physical body, as is shown in the overlay of a digital portrait on a real space interacting with embodied subjects in Figure 19.

The augmented reality of *Under Scan* (Lozano-Hemmer 2005-2008) allows the viewer to encounter a virtual body on an intimate level, but not to become wholly immersed and substitute that body for their own. The viewer, although able to interact with the virtual personage, remains outside of the projection even if their involvement allows it to be seen (Avram [sa]:2) (Figure 4, 10, 12 & 19).

Furthermore, augmented reality, and particularly the way in which it is implemented in *Under Scan* (Lozano-Hemmer 2005-2008), concerns self-reflexivity (Avram [sa]:2)[79]. The self-reflexive nature of augmented reality allows participants to resist immersion. Adams (2003:[sp]) describes augmented reality as presenting participants with obstacles to immersion ,since it exists where the participant is between the real and the virtual, thus becoming self-reflexive and drawing attention to the constructed nature of the virtual as it is contrasted directly with the real. In this way, the augmented reality places focus on its own constructed nature. The space in which experience can be had is thus tenuous, which makes the participant aware of its constructed nature. It is not a utopian space that is on the horizon of attainability that needs to do away with the body. This liminal[80] space includes the actual body and creates a sense of presence in real-time (Adams (2003:[sp]). This can be considered as present in *Under Scan* (Lozano-Hemmer 2005-2008).

According to Ridgway and Stern (2009:127), Lozano-Hemmer gives each body a sense of participation in a dialogue, in that he aims to present the bodies involved in his work not as separate from thought but as that which grants access to, and stimulates thought. Just as augmented reality is used to change the experience of the lived world, the bodies participating in the augmented reality of *Under Scan* (Lozano-Hemmer 2005-2008) can also be understood as changed. I argue that through the use of the technologies included in *Under Scan* (Lozano-Hemmer 2005-2008) the bodily boundaries of the participants change, as per McLuhan's theory of extension.

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[79] Self-reflexivity is discussed in relation to the practical component of this study in the catalogue. *The Body of Sophie* (Le Roux 2016:54-55).

[80] In the context of the text I am referring to being in-between the real and the virtual as well as experiencing both at the same time.

McLuhan (2001 [1964]:6)'s notion of the extension of the bodily boundary through technology may also be applied to the shadows in *Under Scan* (Lozano-Hemmer 2005-2008). As the eye is involved, one might say that the sense of vision is extended (Tremblay 2012:565). Stovall (2014:1) writes that where video is concerned, the eye is mimicked by technology and thus the new world revealed by this video also expands human consciousness. *Under Scan* (Lozano-Hemmer 2005-2008) does however not only extend the senses in this way, but also extends the bodily boundary to include the shadow (Figure 4, 10, 12 & 19).

If one considers Merleau-Ponty (2005 [1945]:143)'s discussion of requiring "fresh instruments"[81], then the shadow may be viewed as such an instrument. According to O'Conner (2005:16), Merleau-Ponty's argument regarding fresh instruments concerns the incorporation of an object into the phenomenological body's boundary. The incorporation of such objects into the body-image and body-schema thus changes the habits of the body, since the phenomenological body experiences the world by means of, or with the aid of, such incorporated objects.

As Bounegru (2009:202) states, the shadow may not necessarily be viewed as part of the body even though it is dependent on it. *Under Scan* (Lozano-Hemmer 2005-2008) draws attention to the shadow by manipulating it, resulting in an interactive experience with Lozano-Hemmer's work. This can be linked with how a tool or other apparatus may be seen as becoming part of the body-image and body-schema through habit (Dant 2004:21). It follows that the body-image and body-schema are extended to the shadow through the habit created by *Under Scan* (Lozano-Hemmer 2005-2008). An example of this is seen in Figure 4 and 12 where the participant is acting in a very particular way in order for his shadow to interact with the digital portrait.

A participant in *Under Scan* (Lozano-Hemmer 2005-2008) would have to interact with the space while taking their shadow into account. Avram ([sa]:1) explains that *Under Scan* (Lozano-Hemmer 2005-2008) makes each projected profile, or performing digital body, specific in scale to the participant's shadow, as can be seen in Figure 4, 10, 12 and 19. Not only do the habits of the body influence the installation, but also the existing body determines the size; the existing body which now has to perform in relation to its shadow.

The notion of an extended bodily boundary may also be applied to Mori's *Wave UFO* (1999-2005). As the participants use their brainwaves to interact with the installation and create images together (Figure 7), their senses become extended. The stimuli in Mori's *Wave UFO* (1999-2005) are mainly visual, and as such can be viewed as an extension of the physical eye rather than as a mere means of immersion seeking to dispel the physical body. The moving image is described by Stovall ([sa]:3) as

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[81] Merleau-Ponty (2005 [1945]:143) uses the example of how a blind man's walking stick starts to become part of his phenomenological body. The blind man's stick starts to become sensitive to other objects and can orientate the blind man in a new way, thus changing his experience of the world.

combining visuals, as it pertains to the eyes, but also the other senses, which creates a symbiosis with the physical body and the information of images. The eyes are thus extended as are the senses when encountering images rich in sense information. As a result, rather than circumventing the body, the body-image and body-schema, through the passivity, that is the inactivity forced upon it by artworks such as *Wave UFO* (Mori 1999-2005) where the body's movements are minimized, changes. In the figure below the passive bodies of participants are shown.

Figure 14: Mariko Mori, *Wave UFO*. 1999-2005. Fiberglas, Technogel, Acrylic, Carbon fibre, Aluminium, Magnesium and Digital media, 4.93 x11.34 x 5.28 m. Madison Avenue, New York. (Beautiful on Fire [sa]:[sp]).

McLuhan, as explained by Tremblay (2012:565), considers the computer an extension of the human brain as it amplifies the brain's functions. *Wave UFO* (Mori 1999-2005) may also be viewed as extending the brain since it interacts with the brainwaves and amplifies them in an artistic manner. If all tools may be considered extensions of the body, as Logan (2013:[sp]) argues, then Mori's *Wave UFO* (1999-2005), may be said to extend the physical brain, and may also be seen as an extension of the mind.

McLuhan, according to (La Boulange 2013:[sp]), explains that language, which may be used as a tool akin to technology, enables human beings to extend their inner minds since it is a vehicle for expressing inner thoughts.[82] *Wave UFO* (Mori 1999-2005) enables participants to give new shape to their inner thoughts through the creation of projections. The decoding of these thoughts might not be as precise or as clear as language, but it still gives expression to something that is considered inner thought, even if it is in a more abstract aesthetic form. Therefore, it is arguable that *Wave UFO* (Mori 1999-2005), although seeking to detach the mind from the body, instead extends the mind through the use of the physical (bodily) brain, as can be seen in Figure 9 where the EEG is shown hooked up to the physical bodies of the participants.

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[82] McLuhan's theories are shows as applied to my body of practical work in the catalogue, *The Body of Sophie* (Le Roux 2016:53)

Another artist whose work concerns the physical body as a phenomenological body with an extendable bodily boundary is contemporary South African based artist, Minnette Vári. The focus on the individual body and the experiences of the phenomenological body in the world, with particular reference to memory and history, can be seen in her video installation piece, *Chimera* (2001) (Minnette Vári 2013:[sp]) (Figure 2, 3, 15 & 20-22).

Chimera (Vári 2001) is meant to deliver strong commentary on Afrikaner culture attached to apartheid, which held ideals that might be considered utopian in nature (Du Toit 1983:297). *Chimera* (Vári 2001) is thus installed in the Voortrekker monument, which Petzold (2007:122) further explains how the Voortrekker monument is a symbol of Afrikaner nationalism. Through *Chimera* (2001) Vári then aims to question the symbolic power of the building along with the ideologies and histories attached to it.

Within the Hall of Heroes, projectors projected onto diaphanous sheets, and the projections further spilled over onto the white marble friezes (van Robbroeck 2011:114). The narrative of the various friezes became part of *Chimera* (Vári 2001), as can be seen in Figures 2, 3, 15 and 21 and could also then be sufficiently commented on. A way in which Vári disrupts the narratives of the friezes is through the insertion of her own body into these narratives, as well as the shadows of the bodies of passersby (Minnette Vári 2013:[sp]), which are shown in Figure 20 and 22. The narratives of the friezes deal with history and may be seen as simulating a strong link with the past. By creating a simulated narrative over the historical narrative, which includes her own body, Vári wishes to point out the constructed nature of history and how it might even be mythical (Cloete 1992:45). Consequently, the reality of the past becomes questionable through the use of augmented reality.

The notion of the past as mythical is strengthened through *Chimera*'s (2001) depiction of Vári as morphing, flowing from one identity to the next, is depicted as a beast-headed, flying woman, and a shaman or shepherd (Stutzer 2008:13). One such form can be seen in Figure 21 and 22. Through this artwork, the familiar, or unquestioned, thus becomes viewed as strange through its disruption and purposeful change (Alborough 2010:30).Van Robbroeck (2011:114) explains that the utopian vision of the past, particular that of the Voortrekker monument, is hereby subverted and revealed as dystopian instead.

Like Lozano-Hemmer, Vári uses augmented reality in her work. However, the aim of Vári's augmentation, unlike Lozano-Hemmer's, is not to facilitate real-time interaction with a real and simulated space, but instead to point out the simulations of the real space of the Voortrekker Monument (Stutzer 2008:16). The images of *Chimera* (2001) and the friezes of the Hall of Heroes become connected and create a space for interaction as the viewers' shadows are also disrupted, or became part of the projections and narratives of the friezes (van Robbroeck 2011:114). This phenomenon is shown in Figure 20 and 22 using my own shadow.

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Vári's works may thus be interpreted as drawing attention to embodiment, especially in regard to her naked body inserted into a historical utopian narrative in *Chimera* (2001). An example of Vári's nudity and morphing shape can also be seen in the figure below. The focus of the installation may be argued as Vári's interaction as a digital body with the physical space. The projection is highly individualistic (van Robbroeck 2011:115), drawing from Vári's own experiences, which are inseparably linked to her body[83]. The individualistic nature of the work does however not alienate viewers or force them to supplant their bodies and become immersed in the projection with Vári's body as a digital replacement (Luzern 2004:28). McFadden (2005:2) suggests that Vári's body and the experiences portrayed by that body in her artworks implies that the viewer has to refer back to his/her own body as well as individual experiences and memories.

Figure 15: Minnette Vári, *Chimera (Black Edition).* 2001. Digital media, Variable. (Perika Epitez Forum 2003:[sp]).

The way in which the body is presented in *Chimera* (Vári 2001) also draws further attention to its form. The monstrous and composite nature of the various morphing identities Vári takes on lies outside a conventional or normal body-image. In this regard, one might consider, for example, the goat-headed figure of Vári in Figure 2, 15 and 21. Although the monstrous is not the focus of this study, the way in which it places emphasis on the body is noteworthy. Vári's monstrous body in

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[83] My own body and its relevance to my body of practical work is discussed in the catalogue, *The Body of Sophie* (Le Roux 2016:53)

Chimera (2001) is an exaggerated body, an overabundance of flesh. The monstrous body always draws attention to its constructed nature (Bissonnette 2010:112)[84], that is: it reflects on its physicality.

The supplanting of the physical body for the digital body is also prevented by the representation of the monstrous body in Vári's work. The viewer may identify with the body, but becoming immersed in it is not desired by the participant. Monstrous bodies present viewers with a body-image and body-schema with which they are not familiar. The experiences of the individual body parts may be understood by the viewer, but the specific arrangement of the monstrous composite body presents the viewer with a total experience that is unfamiliar.

As the participants cannot become fully immersed – despite the fact that the experience may be somewhat immersive – the body can be considered instead as extended. The extension of the participants' bodies may be linked, as with Lozano-Hemmer's *Under Scan* (Lozano-Hemmer 2005-2008), to their shadows. Unlike *Under Scan* (Lozano-Hemmer 2005-2008), however, the installation's focus is not rooted in interaction based on the shadow, but the shadow is still prevalent as shown in Figure 4, 10, 12 & 19. Alborough (2010:30) describes the shadows of those within the projection space as layering the meaning of the projection further as they interrupt it in a manner similar to the way Vári interrupts the narratives of the friezes (Figure 20 & 22). This might make viewers more aware of their shadows and thus the implied body from which it results.

Within this subsection the phenomenological elements in the new media artworks *Under Scan* (Lozano-Hemmer 2005-2008) (Figure 4, 10-1 & 19), *Chimera* (Vári 2001) (Figure 2, 3, 15 & 20-22) and *Wave UFO* (Mori 1999-2005) (Figure 1, 6-9, 14 & 16-18) were discussed. Emphasis was placed on the body in all of the abovementioned works and how this differs from the dualistic notion of immersion into a utopian virtual world. It was found that *Under Scan* (Lozano-Hemmer 2005-2008), and *Chimera* (Vári 2001) both make use of augmented reality, taking the body and life-world into account in this way. It was further discussed how the extension of the body through the technologies involved, as well as the inclusion of shadows in both works, places deliberate emphasis on the body. It becomes clear, then, that the role of the body in the works discussed in this subsection is not to be discarded in favour of immersion. Rather, it should be noted that the body and its extension in space forms an integral part of how a virtual or augmented reality may be experienced.

3.5. A phenomenological reading of *The Chrysalids*

In this subsection I discuss *The Chrysalids* (Wyndham 1955) in relation to phenomenology as it is concerned with embodiment, with particular emphasis on Merleau-Ponty's conception of

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[84] The monstrous body's relevance to my body of practical work is touched upon in the catalogue, *The Body of Sophie* (Le Roux 2016:26-27).

phenomenology. This subsection argues that although *The Chrysalids* (Wyndham 1955) may contain underlying elements of Cartesian dualism,[85] phenomenological traits still persist within the narrative. Particular emphasis is placed on Sophie as a character, and I argue that she may be viewed as more phenomenologically relevant than the telepaths.

The Chrysalids (Wyndham 1955) concerns the events to which certain individuals are subjected. The narrative is constructed around the various experiences of the main character, David, and his subjective interpretation thereof. It is also important to note that although the mind-space is part of the telepathic community's frame of reference and generates experiences, the narrative is ultimately driven by events in the real world.

Driving forces in the narrative of *The Chrysalids* (Wyndham 1955) can also be interpreted as concerning the physical body. For the telepathic group, the impetus to leave Waknuk (Wyndham 1955:132) concerns their fear of being captured and tortured. This implies a concern for their bodies, the fear of the destruction of the body, as well as the unpleasant experience of pain. It also indicates that the telepaths, although capable of sharing their minds, are still dependent on their bodies.

Pain and its consequences can be understood as becoming the main concern of those in pain, focussing more on the physical than on the cognitive (McLane 1996:108). Within the framework of *The Chrysalids* (Wyndham 1955) such pain would mean that the telepaths would be reduced to act and suffer as other people and mutants do. Their mental superiority wanes and may be seen as becoming a weakness.

Katherine, one of the telepaths, is captured and tortured (Wyndham 1955:130). Her telepathic ability does not spare her pain or provide an aid to the escape of immediate pain, but instead she cannot help but subject all of those mentally connected to her own pain, which they feel through her (Wyndham 1955:130). It can be understood that not only are the telepaths connected to each other mentally, but that in some way they are also connected to the bodies of the other individuals within the telepathic group. The bodily experiences of each individual can be shared by the group at large. This indicates that each telepath is not only concerned with his or her individual body, but also the bodies of the other telepaths.

The mind-space the telepaths share is in a similar fashion not only an interlinking of minds, but an interlinking of subjective bodily experiences. The world, or life-world, of each individual can only be accessed through the body of that individual (Spurling 2014:21). Rosen (2000:[sp]) explains that one is first a sensing subject, that is receiving input from the senses, and then a thinking subject, forming

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[85] As discussed in chapter two: *Immersion and Cartesian Dualism in Relation to* Wave UFO *and* The Chrysalids (22-48), in subchapter 2.6. *Cartesian Dualism and* The Chrysalids (37-42).

thoughts derived from sensory input. Therefore, everything that exists or is created in the mind-space must first have been seen or experienced by one of the telepaths in the real world through their senses.

When, however, information is relayed without it first forming part of the other's embodied life-world, as with Petra and unknown voices, later revealed or headed by the Sealand woman (Wyndham 1955:115), certain difficulties arise. It becomes evident that even though experiences can be shared via the mind-space, the recipient needs to have had a relatable physical experience for it to make any sense. The embodied experience of the individual is thus still his or her primary way of making meaning of their life-world, even if their life-world includes the mind-space.

Although it can be argued that the telepaths are intimately connected to their bodies, their experience of pain and trials on a first-hand account is lessened in comparison to a character like Sophie. Throughout *The Chrysalids* (Wyndham 1955) very little physical strife actually befalls the core group of telepaths, David, Petra, and Rosalind.[86] As the fighting commences at the end of the novel (Wyndham 1955:185), they are similarly also not physically fighting any opponents. In contrast to this I argue that Sophie's experiences are very visceral and more immediately physical.

Sophie is subjected to pain in instances where the telepaths are spared from pain. It would seem that Sophie's experiences are connected to pain. Her very first encounter with David leads to her injuring her foot (Wyndham 1955:8). Her second encounter with David leads to emotional distress as well as finally dying from an arrow shot into the back of her neck (Wyndham 1955:187).

Merleau-Ponty (1973:60-61) notes that pain gives a type of meaning to life inasmuch as pain is a way of experiencing the world and rendering it meaningful. It then follows that Sophie's experience of the world is more immediate and even more varied than an individual telepath's. Her experiences are direct and subjective. The telepath's experiences may have been mediated by other subjectively interpreting telepaths before it reaches the other individuals.

From a phenomenological perspective focusing on the body, the telepaths are not the only interpreting subjects. Sophie can also be understood as a thinking and sensing subject. From a phenomenological point of view, Sophie's physicality can be interpreted as that which reinstates her as a subject, specifically a body-subject (Priest 2003:72) In this way, Sophie's bodily experiences can be interpreted as meaningful, whereas she might have been regarded as simply an object amongst other objects when considered in accordance with the logic of Cartesian dualism. Sophie's experience of objects through the body-subject that she is implies that she is able to interact and experience the lived-world rather than simply being merely subjected to it as an object.

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[86] An exception to this is David being lashed by his father (Wyndham 1955:52). Other than this event, the core telepaths receive no real physical harm and even though they journey into danger do not suffer from deprivations such as lack of water or food.

Sophie's actions and emotions can now be interpreted as stemming from her subjective experience of the world, rather than as her mind not having full control of the object that is her body. When Sophie breaks down into sobbing it can thus be interpreted not as weakness or the assignment of a lower order in a hierarchical structure, but rather as Sophie's reaction to her subjective experience of the lived-world. Sophie's emotions are thus an expression of her distinctive subjectivity, since as a subject she has interpreted her experiences of her lived-world, and is then interacting with the world by living out her reactions to these experiences.

Therefore, Sophie's body becomes an expression of her subjecthood. Sophie is described as being grubby (Wyndham 1955:177) and uncared for, and as wearing tattered clothing. These descriptions become an expression of Sophie's embodied experiences in the world. Her unkempt look as well as her deteriorated clothing provides a testament to Sophie's being-in-the-world. Her appearance also allows for an interpretation of what her lived experiences in this world have been. Sophie bares evidence in physical form of interacting with her life-world, a place that is itself, like Sophie, unkempt.

Merleau-Ponty (1968:248) notes that the flesh of the individual is also the flesh of the world. In the case of Sophie, her body mirrors more closely the particular world described in *The Chrysalids* (Wyndham 1955), certainly more so than the bodies of the telepaths. The telepaths wear clothes embroidered with a cross, as do the people of Waknuk (Wyndham 1955:176). This is a physical manifestation of the beliefs and ideologies prevalent in the sheltered community in which they grew up. Sophie, on the other hand, is a physical manifestation of the mutated world at large through her mutation.

The world in *The Chrysalids* (Wyndham 1955) is bent and mutated into a new and frightening shape. Sophie is connected to this new, mutated world through her own mutation. This is to say that Sophie was influenced by her life-world in a way over which she had no control. This is evident in the phenomenological argument which holds that the world precedes any and all individuals (Simpson 2014:12). Sophie's world is not constituted by her as a subject, but rather, her subjecthood is shaped by this preceding world before she is even born.

Sophie's experiences of this mutated world is also influenced by her mutated physicality. Toombs (2001:247) notes that a change in the body qualifies a change in the experience of the lived-world. In Sophie's case her change is only a difference from those around her, but it has an adverse effect on her experience of the world. Because of Sophie's mutation, her parents keep her apart from the community as best they can (Wyndham 1955:9), causing her to lead an existence that is lonely. Furthermore, Sophie is finally sterilized and sent to the Fringes because of her mutation. This also implies a vast difference in her experiences when compared to a non-mutated individual.

Bodily experiences are also not something Sophie shies away from. Sophie is sexually active and wants to keep it that way (McLeaish 2012:32). She is also not ashamed of being naked, as is exemplified when she undresses in front of David, Rosalind, and Petra (Wyndham 1955:176). It is implied that Sophie acknowledges her body as a means of interacting and making sense of the world. Her sexual relationship with Gordon is also a way in which she has gained a place within the community of the Fringes (McLeaish 2012:32). Sophie thus uses her body to her benefit even though it is the same body that has placed her in difficult circumstances.

The mutation of Sophie's body can also be traced back to the notion of evolution evident in *The Chrysalids* (Wyndham 1955). Sophie as a mutant is excluded from the next step in human evolution, namely, the telepaths (Brians 1984:256). As a result, Sophie's experiences of the world are looked down upon as not meaningful enough for her to pass on her particular genes through children with similar bodies allowing for similar experiences. Instead, the general view is that it is the telepaths whose experiences of their life-world should be passed on.

Telepathy is strongly associated with the mind, as discussed in chapter two. What Wyndham fails to describe in *The Chrysalids* (1955), however, is the fact that the mind is dependent on the physical body, particularly, the brain. I argue that what this points to is not necessarily a change in the mind, but rather a physical change in the brain, in accordance with Wyndham's interpretation of evolution.

The telepaths are frequently referred to as not having any physical deformities (Wyndham 1955:132). It might be true that on the outside there is no physical difference, but in order for the telepathic ability Wyndham describes to occur, within his own framework of evolution, a change in the physicality of the brain is implied. This would indicate that the composition of the brains of the telepaths have in some physical way changed from a normal brain. Following this, it becomes apparent that it is still only through the body that the world can be experienced (Dawson 2013:258). Such a radical change in the experience of the world must also be reflected in the body in some way.

The body's experience of the world as related to its location in the world is also acknowledged in *The Chrysalids* (Wyndham 1955). In this regard, the body is an orientating factor for the embodied individual (Kaylo 2003:2), since it is the body which allows for the understanding of one's location in the world. In *The Chrysalids* (Wyndham 1955) the ties of the body to time and space are also prevalent. The telepaths, who I have argued as still being embodied beings, find themselves in a hostile world. They wish to leave this environment in order to reach the utopian city of telepaths.

This utopian city exists in a place that to them is similar to classic utopias. It is in a place very far away that is new to all of them (Vieira 2010:3). Unlike the notion of a cyber-utopia, the city of the telepaths requires the telepaths to physically be there in order to form part of this utopian community. The telepaths therefore have to travel using their bodies in order to be picked up by the Sealand

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woman who then physically takes them there (Wyndham 1955:200). The physical body is thus part of the requirements in order to achieve this notion of utopia, and cannot be discounted altogether.

In this subsection I have discussed *The Chrysalids* (Wyndham 1955) in relation to Merleau-Ponty's conception of phenomenology. It was concluded that the narrative is driven by events that include the body, even the bodies of the telepaths. Particular emphasis was placed on Sophie as an embodied character, as I argued that she may be viewed as a subject from a phenomenological perspective rather than as a mere object from a Cartesian perspective.

3.6. Conclusion

Throughout this chapter Merleau-Ponty's conception of phenomenology as it relates to embodiment has been discussed. Emphasis was placed on the notion that the body and mind are inseparable, contrary to the model of embodiment provided by Cartesian dualism, which views the body as an object separate from the mind-subject. It has been argued that the mind arises from the body just as the body and mind both arise from the world. In conjunction with this notion that all experience then stems from an embodied experience of the world, immersion and virtual reality were also considered. It was found that immersion uses the senses and is thus an affirmation of embodiment. Moreover, an argument was also made supporting the idea that virtual reality also extends the body through extending the senses, rather than abandoning the body. It was argued that through changing the body-image and body-schema, technology can be used as a tool which functions as an extension of the body.

The new media artworks of Lozano-Hemmer, *Under Scan* (Lozano-Hemmer 2005-2008) (Figure 4, 10-12 & 19), and Vári, *Chimera* (2001) (Figure 2, 3, 15 & 20-22), were discussed in relation to phenomenological embodiment as opposed to the mind-body dichotomy of Cartesian dualism. It has been further demonstrated how Lozano-Hemmer's *Under Scan* (Lozano-Hemmer 2005-2008) and Vári's *Chimera* (2001) can be interpreted as examples of Merleau-Ponty's phenomenological conceptions of embodiment.

Both of the abovementioned artworks were discussed as offering the participants or viewers an augmented reality which includes the body as opposed to providing a separate, constructed utopian space which seeks to abandon the body. As a result, the ideal of immersion into a utopian world by means of an abandonment of the body is largely undermined, since both artworks aim to include the body as well as the senses in order to create a better understanding of the work in the viewers or participants. *Under Scan* (Lozano-Hemmer 2005-2008) (Figure 4, 10-12 & 19) and *Chimera* (Vári 2001) (Figure 2, 3, 15 & 20-22) were further discussed in relation to Mori's immersive artwork, *Wave UFO* (1999-2005) (Figure 1, 6-9, 14 & 16-18).

Moreover, the theories of McLuhan concerning the extension of the bodily boundary through media was discussed and applied to *Under Scan* (Lozano-Hemmer 2005-2008), *Chimera* (Vári 2001) and *Wave UFO* (Mori 1999-2005), demonstrating how the bodily boundaries of the participants became extended through the technologies present in the aforementioned artworks. *Under Scan* (Lozano-Hemmer 2005-2008) and *Chimera* (Vári 2001) extended the bodily boundaries of participants to their shadows as well as referring back to the participants' bodies and sense memories. Additionally, *Wave UFO* (Mori 1999-2005) was discussed from a phenomenological perspective and found not to facilitate Cartesian mind-body dualism after all, but can instead be read as extending the brain as well as the inner mind through the use of virtual reality technologies.

Finally, *The Chrysalids* was discussed from a phenomenological perspective, in stark contrast to the dualistic interpretation of this text found in chapter two. It was argued that Sophie can indeed be viewed as an embodied subject, and that even the telepaths, with their primary focus on the mind, cannot ultimately relinquish their bodies in their search for a utopian existence. Overall it is evident from this subsection that, contrary to the Cartesian conception of mind-body dualism, the body cannot be wholly abandoned, as it serves as part of the constitution of the mind, and aids in revealing the world as a meaningful space

CHAPTER FOUR: SACRIFICE AND THE BODY IN VIRTUAL REALITY: THE BODY AS VICTIM IN NEW MEDIA ART AND *THE CHRYSALIDS*.

4.1. Introduction

This chapter investigates immersion and disembodiment in virtual reality. This is done in relation to new media art, as underpinned by the Cartesian split, and in accordance with the model of sacrifice provided by philosopher René Girard (1923–2015). The utopian vision of virtual reality is briefly discussed in relation to mimetic desire, as it pertains to Girard's notion of sacrifice, as well as embodiment. Sacrifice is focused on and explored in terms of the scapegoat which is related to the body and immersion. Particular emphasis is placed on the four stereotypes of persecution, which is set out by Girard (1986:12) as criteria for sacrifice. Disembodiment, virtual reality and immersion are relation to Girard's four stereotypes of persecution. These elements are further investigated in terms of the selected new media artworks, as well as the science-fiction novel used for the inspiration of my practical work, *The Chrysalids* (Wyndham 1955).

The main focus of this chapter is on how the cyber-utopian myth of abandoning the body sets the body up as a scapegoat as per the abovementioned four stereotypes of persecution. In this chapter it is discussed how the body is blamed for the strife caused by the inability to obtain cyber-utopia as well as how this substitution forms part of scapegoating (Girard 1996:12). The body is discussed in relation to a loss of difference (stereotype one), crimes that threaten order (stereotype two), the body's victim's marks (stereotype three), as well as the final violence, or lack thereof, of the sacrifice (stereotype four) (St-Pierre & Holmes 2010:[sp]). I argue that since the body is portrayed as a hindrance to attaining cyber-utopia, the body may be viewed as that which is to be sacrificed.

In order to better illustrate my argument, examples of new media art are discussed in terms of the four stereotypes of persecution, as it pertains to immersion and cyber-utopianism's notions of disembodiment. The new media artwork of Mariko Mori, entitled *Wave UFO* (1999-2005) (Figure 1, 6-9, 14 & 16-18), is discussed with particular reference to its immersive qualities and the exclusion of the body.

The Chrysalids (Wyndham 1955) is discussed in relation to utopianism as well as the four stereotypes of persecution. The focus of the discussion falls on the character of Sophie. Sophie is discussed as a scapegoat in terms of her loss of difference, crimes that are taboo or challenge order, her mark/s as a victim, as well as the violence done to her. I argue that according to the abovementioned criteria, Sophie may be viewed as a sacrifice.

I then argue from a phenomenological approach, as far as it concerns embodiment, that the sacrifice of the body cannot occur in terms of full immersion into a cyber-utopian world, as the body and mind

cannot be fully separated as is assumed by the cyber-utopian myth. New media artworks concerned with the involvement of the body, that removes the body from the position of scapegoat, namely *Chimera* (2001) (Vári 2013) (Figure 2, 3, 15 & 20-22) and *Under Scan* (Lozano-Hemmer 2005-2008) (Figure 4, 10-12 & 19), are also discussed.

4.2. The stereotypes of Persecution

This subsection is concerned with the four stereotypes of persecution, as set out by Girard (1986:12-23). The four stereotypes of persecution are discussed individually so as to provide an understanding of the concepts involved. The conditions for a sacrifice are laid out in the four stereotypes of persecution, and particular emphasis is placed on the role of the scapegoat.

The first stereotype of persecution is founded upon Girard's conception of mimetic desire. Mimetic desire concerns imitation, particularly, that of a model. According to Girard, the process through which individuals desire can be understood as "triangular desire" (Townsley 2003:[sp]). Triangular desire is constituted by triadic terms: the subject, the model, and the object of desire (Williams 2000:31). Girard (1972:147) indicates that the only reason the object is desired by a subject in the first place is because he/she believes the model, some 'other' person, desires it and the subject thus wishes to imitate the model's desire. It follows that desire, as Girard (1986:64) describes it, does not stem from the subject, but is rather mediated by the model.[87]

The relation of the model/mediator of desire to the subject is also of importance as this may determine the strife that arises from the imitation of the model. Internal mediation is an example[88] concerning the relation between the model and subject. Internal mediation leads to the model and subject to becoming rivals. In the case of internal mediation there is very little separating the subject and model (Gallese 2009:18). This is usually when the subject and model exist within a specific community and are in close proximity to one another (Andrande 2012:[sp]).

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[87] Gallese (2009:18) explains that the object which the subject desires is secondary since the initial desire is to become the model. Girard (1966:83) states that mimicking the other is derived from this primary desire. The model is usually an idol to the subject. In other words, the model seems far superior to the subject in many ways, therefore whatever the model might desire would also boost the subject up to that superior status if he/she possessed it (Andrande 2012:[sp]). All human beings within a society may become models imitated by others, as presenting oneself as model for imitation is used to cover the unoriginality of that individual (Grande 2009:64).

[88] External mediation is the other example of the relation between model and imitator (Steinmair-Pösel 2007:5). External mediation is when that which mediates the desire of the subject is not in direct competition with the subject for whatever he/she desires (Andrande 2012:[sp]). In this way even though the model has led the subject to desire an object, they do not compete for the object and thus the subject and model do not become rivals. There is a separation between the subject and model in some way. This may be through social status, time, space or intellectual capacity. This is referred to by Girard (1972:147), borrowing from Gregory Bateson's idea concerning the double bind (Webb 2014:95), as a Mimetic double bind. Girard (1972:147) explains that a Mimetic double bind occurs when the model exudes a, or many, contradictory impressions concerning imitation. External mediation stops the model from emulating the mediator or model as opposed to just imitating him/her (Stewart 2013:iv).

The closeness between the model and subject leads to their desires converging on an object (Bettina [sa]:7). As the desire for the object is in turn derived from the desire to be the model, Townsley (2003:[sp]) notes that internal mediation allows the model to be aware of the subject wanting to be him/her as he/she possesses or desires an object. Because the model possess or desires the same thing as the subject, the subject begins to see the model not only as good, but as bearing him/her ill will (Townsley 2003:[sp]).

The conflict that arises from internal mediation is not necessarily linked to the scarcity of the object/s that is/are desired. Scott (2013:429) explains that internal mediation entails conflicting mimesis as it contains a double imperative. The model initially mediates the desire of the subject and implicitly commands that he/she (the model) be imitated. If this command were to be followed through, then the model would have to be replaced eventually by the imitating subject (Scott 2013:429). In order to avoid this replacement, the model also implicitly commands that he/she should not be imitated.[89] Conflict arises due to the confusion of the subject and model as one seems to best the other constantly because the one reflects and imitates the other's desire (Potolsky 2006:147).[90]

Moreover, such mimetic imitation is considered to be contagious (Palaver 2013:[sp]). As the model and subject begin to converge, the imitation spreads unchecked. The model is not necessarily aware that that he/she has no original desire and that his/her desire has been mediated by someone else in the first place (Dupuy 2011:6). The model then begins to desire what the subject desires, thus desiring a copy of their own initially mediated desire (Grande 2009:22). Both these parties fall into imitating each other and through this process come to resemble each other more and more, even though they try fervently to assert their difference (Potolsky 2006:148).[91]

The first stereotype of persecution is directly linked with mimetic desire and imitation. According to Girard (1986:13) it is the loss of difference between individuals in a community and the resulting confusion which leads to high levels of violence that threatens the community itself.

The loss of difference is accompanied by a breakdown in social order. As violence spreads, the boundaries become blurred between what is right and wrong according to societal law (Girard 1986:13). The divisions which separated and differentiated social classes and even cultural groups

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[89] This is referred to by Girard (1972:147), borrowing from Gregory Bateson's idea concerning the double bind (Webb 2014:95), as a Mimetic double bind. Girard (1972:147) explains that a Mimetic double bind occurs when the model exudes a, or many, contradictory impressions concerning imitation.

[90] The model then becomes not only a revered person worthy of imitation, but also an obstacle. Girard (1972:165) terms this the "model-obstacle" or "rival-model". A model becomes a rival when both the model and subject desire the same object and are unwilling or unable to share the desired object (Webb 2014:107). The subject becomes torn between idolising the model and hating the model, placing him her in a demonized position. In order to attain the object, model and subject must then compete for the object, thus leading to strife or violence (Tanti 2012:6).

[91] This is termed *double mediation,* which falls under internal mediation, as it creates a feedback loop between the two imitators which draws attention away from the initial object which both desired (Potolsky 2006:148).

begin to vanish. It follows that the differences by which individuals and groups identify themselves no longer exist. According to Girard (1986:13) this leads to the community collapsing into a monotony which he describes as being monstrous.

In such a state of chaos, the focus of the community tends to fall upon negative exchanges in the community. Where previously exchanges were good and bad, negative exchanges now become prominent because of the confusion caused by the lack of difference (Sheperd & Belicki 2008: 390). Revenge becomes more prominent as the negative exchange escalates, pitting more people against each other. At the same time, however, it fails to differentiate them as their actions and ways of problem-solving become the same (Sutherland 2003:181).

Such extensive mimesis and violence leads the community to the "Sacrificial Crisis" (Bertonneau 2014: [sp]). In such a state of increased rivalry, where a cycle of violence through revenge and mimesis has established itself, the community begins to search for the cause of their current state (Williams 2000:24). In order to try and rid the community of the overabundant and uncontrolled violence, they seek a scapegoat (Golsan 2002:31). This scapegoat is meant to be sacrificed or expelled from the community so that the violence can find a "proper" channel, allowing for the return of difference to the community (Girard 1972:10).

Girard (1986:14) explains that the loss of difference is an eclipse of culture in which the whole community participates. Those who are guilty can however not blame themselves and look to find something/someone else to blame (Myers 2012:4). The selection of a scapegoat to be a sacrificial victim may seem random when viewed from the outside. Upon closer inspection however, it becomes apparent that a victim is selected according to the stereotypes of persecution, as described by Girard (Mahoney 1999:10).

The first stereotype, concerning the lack of difference, leads to the second stereotype of persecution. Part of the first stereotype is the transposition of guilt. The community is already looking for an individual or individuals to blame (Davis & Fallaize 2000:43). Girard (1986:16) notes that since the community cannot be interested in what initially caused their decent into mimetic strife, they instead tend towards persecution. The community wishes to purge the continuous and contagious violence they have unleashed through their mimetic imitation (Girard 1986:16). They are thus attracted to individuals whose particular crimes or activities seem to have affected society at large in some way (Ozawa 2009:49).

Crimes that the community are drawn to are usually crimes which display a loss of difference (Guénin-Paracini & Gendron 2008:11). Girard (1986:15) notes that the crime which a scapegoat is stereotypically accused of is a crime that violates the strictest taboos in that society. The scapegoat is accused, the crime being actual or fabricated, of crimes which include violence directed at either the

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extremely elevated in society, or the weakest in society (Robinson-Harmon 2010:4). These crimes display a lack of differentiation between social classes or established order in society. It seems as if the crime is an attack on the cultural order's foundations, such as the order of the family and state which are integral to the social order (Storrs 2004:11).

The community has to link the confusion and indifference of the society at large with the individual victim or small group. By believing that the scapegoat is harmful to society, the persecutors are able to forge a viable link between a scapegoat, that is essentially insignificant, and the social body's scale of disruption (Girard 1986:15). There exists no actual link, but the crowd rationalises their actions in this way (Robinson-Harmon 2010:7). The community blames the whole of the violent situation on the perpetrator of this crime.

What follows is the third stereotype of persecution. The scapegoat usually appears as a small group or an individual (Lensen 2011:104). This group or individual is not necessarily on the lower end of the social order, but can also often be those who used to have power over the community (Lensen 2011:104). According to Girard (1986:18) those who are designated as scapegoats carry the "mark of a victim". Some sort of abnormality marks the person or persons, impressing their difference on the community. The scapegoat may bear some sort of moral or physical deformity that can be linked to their crime (Kearney 2003:44).[92]

Epstein (2016:123) states that scapegoated victims are often marked by their marginality. These marginal individuals can be either insiders, like authority figures, or outsiders, such as foreigners (Girard 1986:25). What links these victims is usually the fact that they have no means to defend themselves, being either too weak or isolated.

That which sets the scapegoat/s apart from the community can be real or simply fabricated, but to the community it is real (Isaacs-Martin 2012:3).Controversially, the victim's mark, real or fabricated, has to differentiate the victim in some way, because in reality they are not so different from the community (Bardini & Friedewald 2002:201). The lack of difference in a scapegoat that is identified as radically different by the community reveals the fragility of the system's boundaries (Rieneke 1997:211). Girard (1986:25) explains that the scapegoat is punished for not being as different as is expected of it, since it does not actually differ from the members of the community. Therefore, it is not truly the difference that is persecuted in a scapegoat, but the lack thereof.

The scapegoat is often demonized, described as radically different. A monstrous image of the scapegoat is conjured up in an attempt to link the moral implications of his/her crime to the community's state of unrest (Ward 2010:136). This is also done with the purpose of making the

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[92] Palaver (2013:[sp]) notes that stereotypical victims include those that deviate from the norm, such as racial, religious and cultural minorities.

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expulsion of the victim effective, so that by purging the community of something they believe to be evil or impure, difference can return (Andrande 2012:[sp]).

Girard (1986:35) explains that by presenting the scapegoat as monstrous, all the marks of that which indicates a victim are united. The physical deviations of the victim might be real and understood as monstrous, but the moral implications only exist so far as the community projects such issues onto the victim (Miskovic 2013:[sp]). The monstrous nature imposed on the scapegoat is, as with all monsters, composite (Rahebi & Marandi 2013:7). The composition of the monster, that is a body that shows the combination of different categories that are no longer separate, threatens order as it displays a loss of difference. Girard (1986:33) describes the monster as the result of the disintegration of society when it is in a state of confusion, as well as the reassembling of its individual parts which shows a lack of order still. Sharpe (2010:5) explains that the monster becoming a scapegoat is inevitable, as the scapegoat reinstates order and difference in the community as opposed to the chaos of the monstrous.

By presenting the scapegoat as a monster, recognising him/her as an actual victim becomes highly improbable (Girard 1986:35). The victim and the supposed crime become inseparable. This is an act of dehumanization in which the scapegoat is cut off from resembling the community too closely (Douard 2009:39). The aim is to substitute the scapegoat for the whole community, and it follows that the victim must in some way still resemble those within the community. It is however of paramount importance that the resemblance between the victim and those of the community should never lead to a confusion of the scapegoat and the community (Girard 1972:11). The difference between the community and surrogate victim must be maintained, even if it is only projected onto the victim.

The fourth and final stereotype of persecution is the violence done to the scapegoat (Ma 2000:166). The murder or expulsion of the scapegoat is completely justified by the community due to their belief that the scapegoat was monstrous or evil in some way (Williams 2007:84). The community's role or guilt in the violence surrounding them is denied and transposed onto the scapegoat (Henrikson 2009:258). Persecutors involved in banishing or killing the scapegoat believe that they do so through necessity; they portray themselves as the victims justly defending themselves (Isaacs-Martin [sa]:9). Girard (1972:14) further explains that those who sacrifice a scapegoat participate in the process not because they see it as something emanating from themselves, but instead as something necessary that has become their obligation due to some external force.[93] The killing of the scapegoat is thus the community's duty, and after the scapegoat has been killed or expelled, the community is reconciled and a state of calm returns (Green 2012:39).

Killing or expelling the scapegoat may be understood as a sacrifice. The scapegoat mechanism is explained as playing host to the notion of sacrifice since it developed within this mechanism

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[93] Here Girard (1972:14) refers to a divine decree, but for the purposes of this study, sacrifice in a religious and ritualistic manner is not discussed in depth.

(Wandinger 2010:27). Sacrifice happens at the pinnacle of violent behaviour in the community when the killing of the selected scapegoat is the last act of violence (St-Pierre & Holmes 2010:[sp]).[94]

A violent act can be identified as a sacrifice when that act of violence restores order to the community (Sutherland 2003:182). A sacrifice is also designed to strengthen the social fabric of the community, making it harder for reciprocal violence to take hold (Girard 1972:13). The sacrifice is what protects the community from the violence it participates in and falls victim to, because it has to choose a victim that is not truly part of itself (Rakoczy 2004:30). The scapegoat saves the lives of those in the community that would be killed through reciprocal violence, because it instead is killed. With the focus of the community purely concentrated on the scapegoat that is to be sacrificed, the original reasons which divided the community fall away and are completely removed when the victim is killed (Girard 1972:3).

According to Girard (1972:13), the fact that the victim cannot retaliate or be avenged is part of why the sacrifice of the scapegoat enables the community to return to normal. Sacrifice entails violence without causing the community to fall back into reciprocal violence as the scapegoat has no way of enacting revenge (Chaplin 2014:40). This lack of revenge breaks the cycle of violence. The sacrificial victim or scapegoat becomes a focus point for the violence community members wish on one another, but the victim can be killed or expelled without any real consequences (Pahl 2010:28). Girard (1972:13) explains that the scapegoat is sacrificed because it is close at hand and because it is virtually outside of the community, it has no champion.

Purging and reconciling the community through the sacrifice of the scapegoat is, however, only effective under certain circumstances. First of all, the persecutors must not be aware of the fact that what they are doing is scapegoating (Girard 1972:15). The sacrifice which has freed the community of its violence must not be unmasked as a victim that is innocent (Townsley 2003:[sp]). This is because the link between the external violence of the community being transposed onto one individual would then be broken. The mechanism of scapegoating must function in a covert way (Townsley 2003:[sp]).

The covert nature of the scapegoat mechanism adds to the fact that is not referred to explicitly in texts that aim to transpose blame onto an innocent party (Girard 1986:8). When dealing with concepts and notions that seek to blame an Other[95] the four stereotypes of persecution must be recognized in order

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[94] Ritual sacrifices follow later on, as well as controlled violence hiding its roots in uncontrolled violence present in mass persecutions (Townsley 2003:[sp]). The objective of ritual sacrifice is, however, the same as the killing of the scapegoat by the mob; the cleansing of the community (Roundané 2005:52). The death of a ritual surrogate victim or of a scapegoated surrogate victim diverts the flow of violence and directs it away from the community (Girard 1972:101).

[95] Other is understood in accordance with the way in which communities construct identities in the form of binaries (Bauman 2011:[sp]). The majority's identity is constructed as that which is not like the other (Bauman 2011:[sp]). The other is usually the minority and can often be found on the margins of society (Bulmus 2012:134).

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to justify that the text is indeed aiming to scapegoat a certain party. However, Girard (1986:26) notes that for a text to be classified as a persecution text, setting up a scapegoat to be persecuted, not all the stereotypes of persecution need to be present, often as few as two can still lead to the text being classified as a persecution text.

It can thus be surmised that if a violent act by community members is carried out on an individual who is marginal and carries a victim's mark it can be considered a sacrifice under certain circumstances. In addition, this victim may be viewed as a scapegoat, since the victim is in reality innocent and has the guilt of the community transposed onto it. In order to portray the scapegoat as guilty, he/she is accused of specific crimes. These crimes mimic the lack of difference from which the afflicted community suffers. The origin of the selection of the sacrificial victim lies in the community being plagued by a lack of difference which stems from mimetic strife.

4.3. The Four Stereotypes of Persecution applied to *Wave UFO*[96]

4.3.1. A loss of difference in *Wave UFO*

The myth of a cyber-utopia can also be analysed according to the four stereotypes of persecution. The following subsection investigates the first stereotype of persecution as stemming from the uniformity evident in discourses surrounding cyber-utopia. The new media artwork, *Wave UFO* (Mori 1999-2005) (Figure 1, 6-9, 14 & 16-18) is used to illustrate the notion of uniformity as a cyber-utopian ideal as well as how this relates to the first stereotype of persecution.

In cyber-utopian writings the loss of difference is idealised, as opposed to being a harbinger of crisis. In the case of cyber-utopian thought, it is not difference which this utopia seeks to accommodate, but rather uniformity (Huriot & Bourdeau, Lepage 2013:4). Uniformity denies difference, creating an ideal of the crisis which results from the loss of difference (Girard 1986:79). The absence of distinction between individuals is no longer feared, but strived for. Utopia is usually described as harmony brought about by the expulsion of difference (Pei 2014:308). The expulsion of difference indicates that there can be no mimetic desire, since the model and imitator are the same, and thus this does not lead to violence and a sacrificial crisis.

Cyber-utopia is meant to be community based[97] and non-hierarchical. Equality is a factor that is taken to such an extreme that it aims to become uniform (Ballatore 2014:11). By removing hierarchies, the digital utopia aims to do away with oppression, as well as differences in social status (De Mul

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[96] The four stereotypes of persecution is discussed at length in relation to *The Body of Sophie* (Le Roux 2015-2016), in the catalogue *The Body of Sophie* (Le Roux 2016). The first stereotype of persecution is discussed on page 19-20. The second stereotype is discussed on page 21-25. The third stereotype of persecution is investigated on page 26-28. Lastly the fourth stereotype is dealt with on page 29-34.

[97] Chapter two: *Immersion and Cartesian Dualism in Relation to* Wave UFO *and* The Chrysalids (22-47), subchapter 2.7. The Chrysalids, *Immersion and Virtual Reality* (42-44) discuss the cyber-utopian notions linked with virtual communities.

2010:39). If no one holds more authority than anyone else, then they are essentially the same.[98] Utopias, digital or otherwise, often attack power structures and theorise that the community can govern themselves as they all hold essentially the same values (Aughterson 2002:158). Similarly, the breakdown of boundaries aims for a lack of differentiation. There is no law, and therefore there is no differentiation between what constitutes acceptable behaviour within the community and what is unacceptable.[99] That which differentiates is depicted as unwelcome.

Differentiation between members of the digital community is also presented as being problematic. The aim of the inhabitant of cyber-utopia is to not differentiate from those around him/her so that there can be no strife or discrimination (Lipshin 1997:[sp]). The virtual subject is someone who is perpetually in flux (Sondheim 2007:201). It is a subject whose identity is remade constantly because in cyberspace identity is malleable (Walsh & Causey 2013:8). In this process of constantly changing individuals, "everyone is no one" (Lee [sa]:[sp]). Since everyone in the community is contently changing, they are the same in this regard. Through the elimination of difference, cyber-utopians believe a perfect community can be created.

The notion of a utopian community can also be seen in *Wave UFO* (Mori 1999-2005). In order to experience the 'oneness' that Mori conceptually bases her work on (Angel 2011:[sp]), participants are forced to focus on the similarities between them, not the differences. Participant Ryan (2003:[sp]) states that the focus of the artwork is to learn about others and oneself. This, however, happens not through physical interaction. The representation of one individual's brainwaves and that of another do not vary greatly since the same imaging framework, which is shown in the figure below as well as in Figures 7 and 8, is used for all participants. It then follows that the participants can possibly not identify the brainwave images accompanying theirs as other and alien to themselves. An example of the similarity in the representation of brainwaves can be seen in Figure 16. The middle image shows the three quadrants of the screen depicting the brainwaves as well as the basic pattern in each. *Wave UFO* (Mori 1999-2005) aims to create a type of uniformity between its participants, purposefully allowing for a loss of difference.

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[98] According to Henthorne (2003:63) utopias, such as the cyber-utopia, through their representation of an alternate society, challenge structures and ideologies in society. The creation of fictional utopias usually delivers commentary on the distribution of power and control within a certain society (Malloch 2013:24). The ultimate utopia presents itself as democratic, or rather run by the people without an oppressive governing force. Cyber-utopia is thus represented as being in favour of 'people power', a community that is free of power structures, or where power is distributed equally among the members (Brassier 2015:[sp]).

[99] The utopian vision of cyberspace seeks to limit the involvement of authority in the virtual community. The aim appears to be a circumventing of traditional authorities, laws, and solutions in favour of gaining voluntary help from the online community (Theirer & Szoka 2009:[sp]). Government's input or involvement should not only be limited but completely removed from cyberspace according to this manner of thinking. Cyber-utopia is ultimately a place without boundaries or rules, especially since there is also no one to enforce any rules (Sherwin, Feigenson & Spiesel 2006:3).
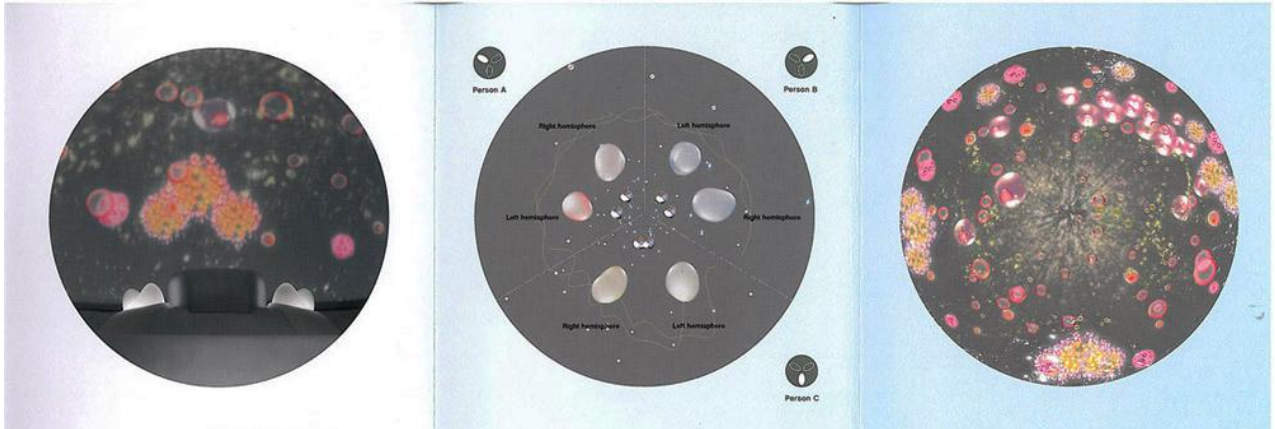
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Figure 16: Mariko Mori, *Connected World*, 1999-2005. Digital media (still). Variable. (Beautiful on Fire [sa]:[sp]).

The perfect, virtual community without difference is, however, unattainable. The nature of utopias, digital or otherwise, to morph into dystopias is of relevance here. Utopia is eternally unattainable, existing in a shifting, *no-place* that is forever out of reach (Robins 1996:77). The cyber-utopia is similarly just beyond the horizon, situating itself not only in the virtual realm, but also in the ever elusive tomorrow of the not-so-distant future (Wertheim 1999:283). Ultimately, utopia cannot be attained. The moment it seems to be attained it morphs into a dystopia (Carol & Totaro 2003:135).

When all differences have been suitably eliminated in order to obtain utopia, what follows is not utopia, but instead a dystopia. Dystopia is the extreme reversal of utopia (Tenedini 2014:3). Dystopia is inexorably connected to utopia as it may be seen to be the result of the utopian vision (Mohr 2007:5). Utopias are often characterised by their uniformity (Goodwin & Taylor 2009:111). Dystopias may be argued as also characterised by a monstrous uniformity, since forced uniformity often results in totalitarian societies (Kamenetsky 1964:118). What is in fact witnessed by the crossover from utopia to dystopia is the return of the sacrificial crisis when all difference has vanished. Similarly, cyber-utopia, when close to being attained, generates strife and must select a scapegoat in order to dissipate the amount of strife it has generated.

It can thus be surmised that the first stereotype of persecution is evident in the notion of the cyber-utopia. The cyber-utopia strives for a lack of difference, thus artworks that makes use of cyberspace which are modelled on the Cartesian split, like *Wave UFO* (Mori 1999-2005), tries to hide difference as much as possible

4.3.2. The Crime of the body in *Wave UFO*

Girard's second stereotype, concerning the crimes to which the community is attracted (Mahoney 1999:10), can also be identified in the utopian narrative of cyberspace and thus *Wave UFO* (Mori 1999-2005). What is of interest to this study is the way in which the body is described in literature on

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cyberspace. The rationalisation as to why utopia cannot be obtained and as to why discrimination as well as strife is still present in cyberspace, even though difference is cloaked in anonymity, is explained as related to the body.

Through being represented as a locus of strife, the body becomes indicated as a scapegoat. The designation of a scapegoat concerns their imagined or actual crimes which reflect the loss of difference in the community (Stuart & Walton 2004:10). The body can be understood as an old scapegoat with a repertoire of 'crimes' when considering the desire to enter utopia.[100]

In cyber-utopian writing the body is accused of various 'crimes' that also reflects the notions of being taboo (Lensen 2011:105). This is mostly due to how the body is described by the Cartesian split. The mind is described as absolutely "pure", whereas the body is described not only as being almost grotesque, but as infringing on the 'pure' mind's freedom (O'Brien 1999:[sp]). Similarly in cyber-utopian writings the body is described as a "prison" for the mind (Krueger 2005:82). The physicality of the body is such a hindrance that it is described as the wilful jailer of the mind, depriving the mind of unlimited pleasurable experiences. A contempt is fostered for the body as it seems to sin against the divine and pure mind (Krueger 2005:82). Cyber-utopian thought also accuses the body not only of denying the mind full immersion, but also of disrupting the level of immersion that does take place.

Post-humanism[101] considers the body to be little more than a machine (Bell 2000:5). It is described as devoid of value and as simply an object. Kroker and Kroker (1996:99) notes that those in favour of abandoning the body describes it as a "violent uncertainty field", the body as is described as dangerously unstable and unruly. The Cartesian split thus places the body below the mind (Grosz 1994:3).

The body may be viewed as rebelling against the mind (Božovič 1998:144).[102] The mind in its superior position is part of a hierarchy that is not reciprocal and in turn part of a system of domination (Prokhovnik 2001:26). With the notions pertaining to virtual reality and the hindering nature of the body, the hierarchy and established order is challenged. The body through its physicality is not only the jailer of the mind, but also challenges the mind's position of control. The mind fails to control the

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[100] Wetheim (1999:19) explains how cyber-utopian thought is a repackaging of older ideals concerning the obtaining of a paradise-like state. In these earlier traditions the body was already identified as a hampering the mind or soul's freedom (Ritchel 2007:3). The body in virtual reality is thus already loaded with negative connotations (Grosz 1994:4).

[101] Post-humanism is discussed as an end goal of human evolution to which there are many paths (Alves 2014:2). The particular aspect of post-humanism that is referred to here is transhumanism, in that it posits that the body should be transcended (Dinello 2005:172).

[102] The argument made here by Božovič (1998:144) concerns the fall of Adam and Eve in The Garden Eden. The argument can be summarised thusly: Sin is equated with the body. If the body can be controlled by the will (mind) of the person involved then sin is minimised. In certain areas however the mind/ will cannot control the body, particularly related here to sex, then the body causes the person to sin (Božovič1998:143-144S).

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body to the extent that it can escape from the body. The mind, or true self is thwarted by the rebellion of the body, its agency becomes limited (Gadow 2003:[sp]).

Rebellion implies both a breaking of a taboo as well as a loss of difference. Rebellion is associated with the attack of individuals within a society who are considered taboo to attack (Girard 1986:15). When an elevated person is attacked it challenges the foundation of society since the hierarchy that is being attacked is a reflection of that society (Girard 1986:15). In the case of the mind and body, the body is shown as not keeping to its place in the hierarchy. Like with an actual rebellion, the rebellion of the body would result in chaos and break down of the social, other forms of, established order.

Not only is the body rebellious but it is also depicted as 'killing' the mind. In cyber-utopian thought emphasis is placed on the body's fallibility and mortality specifically. Cyber-utopia offers immortality, but only to those who can escape their dying bodies (Jordan 1999:185). Immortality implies the notion of becoming godlike, of escaping death as a digital consciousness (Rothblatt 2012:141).[103] What stops the mind from living out its true immortal nature is the dying body to which it is connected (Balsamo 1996:496). In this way the body robs the mind of its ultimate purpose and instead confines it until death, or into death.

The body as detrimental to existence is also present in new media art and the discourses surrounding it. In *Wave UFO* (Mori 1999-2005) the aim is to connect the self with the universe (Angel 2011:4). What is of interest to this study is the fact that, from a phenomenological perspective concerning the body, the main means of connecting to the known universe, the body (Blanchard & Øberg 2015:1), is forced to the margin. The body cannot be part of this higher interaction with the universe in *Wave UFO* (Mori 1999-2005) because, as with the spiritual traditions *Wave UFO* (Mori 1999-2005) is based on, the body is seen as foiling the better nature of the spirit.

Wave UFO's (Mori 1999-2005) inclusion of spiritual ideas implicitly frames the body as negative even if the artwork does not point this out explicitly. In previous artworks by Mori, such as *Shaman girl's prayer* (1996) the Trikāya Doctrine[104] concerning Buddhism is used (Holland 2009: [sp]). The aforementioned doctrine describes a difference between the physical aspect of existence (*nimankaya*), the celestial aspect (s*ambhogakaya*) and the principal of enlightenment (*dharmakaya*) (Holland 2009: [sp]). Holland (2009: [sp]) states that Mori further considers the physical aspect as a "'fire' of sensory based desire" provided by the senses that must be overcome to achieve Nirvana.[105] The body is thus equated with not only an obstacle but a means to the physical which is seen as a negative.

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[103] This focuses on the notion, that the mind is immortal and godlike in anyway (Falzon 2006:108).
[104] The Trikāya Doctrine in Buddhism is concerned with the three bodies of the Buda (trikaya) (Fowler 1999:98). It is part of the Mahāyāna tradition of Buddhism (Xing 2005:1).
[105] *Sambhogakaya* is the aspect of the self that is ultimately concerned with Nirvana (Fowler 1999:98). Mahāyāna Buddhists do not contrast Nirvana, the absolute principle, with Samsara, the impermanent principal

Furthermore the boundary between illusion and reality is what Mori aims to redefine (Botz-Bornstein [sa]:[sp]). In her past works[106] she accomplished this through inserting her own image into fictional situations (Schrieber 1999:[sp]). In *Wave UFO* (Mori 1999-2005) however the aim is to transport the viewer, to make them transgress the boundary between reality and illusion through the use of the UFO[107] (Farrell 2005:[sp]). Through the relative inactivity of the body in *Wave UFO* (Mori 1999-2005) it is implied that the body is associated with reality, not the utopian illusion generated by the artwork.[108] The reality of the body is thus thrown in a bad light, as the mortal body becomes that which allows the digital utopia to remain unattainable according to the cyber-utopian views evident in Mori's work (Kozka 2010:26).[109]

The body's relative inactivity, shown in Figure 14, can thus be linked back to the second stereotype of persecution. In *Wave UFO* (Mori 1999-2005) the body is treated as per the myth of cyber-utopia which indicates the body as guilty of restraining the mind from being free inside a cyber-utopian space. Strife attached to difference in cyber-utopian thought is also attached to the body, resulting in it being almost hidden in *Wave UFO* (Mori 1999-2005). The body's threat to the hierarchy created by the Cartesian split is thus indicated by its relative immobilisation.

4.3.3. Victim's marks in *Wave UFO*

Moving towards the third stereotype of persecution, the language used to describe the body in cyber-utopian literature can be understood as indicating victim's marks. I argue that by positing that the mind and body are separate, the very physicality of the body marks it as a victim. This can then also be seen in the way that *Wave UFO* (Mori 1999-2005) treats the bodies of those participating in this artwork.

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concerned with life (Wilcockson 2005:116). It is believed that Samsara and Nirvana are the same. Wilcockson (2005:116) explains that the *sambhogakaya* body lives out a life in a paradise like state.

[106] Take as examples here *Kumano* (1998), *Birth of a Star* (1995), *Beginning of The End* (1995), *Empty Dream* (1995), *The Shaman-girl's praye*r (1996), *Esoteric-cosmos* (1996-1998) as well the her *Nirvana* (1996-1997) (Guggenheim 2015:[sp]).

[107] The inclusion of the UFO in *Wave UFO* (Mori 1999-2005) may indicate the UFO's symbolism, as explained by Holland (2009: [sp]). This would indicate that the UFO is used as a sign of order in the universe as well as a sphere of safety (Holland 2009: [sp]). It follows that, that which is of focus in *Wave UFO* (Mori 1999-2005) is also order, which is equated with the mind (Schouls 2000:817). In contrast to this, the body is depicted, through its exclusion, as that which represents an opposition to order. The body becomes the antithesis of order, which is accused of threatening the established order just as a scapegoat is accused of threatening order (Van Wormer & Besthorn 2011:98).

[108] Mori, as quoted by Jarrel ([sa]:[sp]) states, concerning her concepts pertaining to artworks such as *Wave UFO* (Mori 1999-2005), concerns the idea that technology and art aspire to resolve the problems facing human beings. If *Wave UFO* (Mori 1999-2005) presents a solution to a human problem and the body is not truly a part of this solution, it is thus implied that the body is part of the problem.

[109] What artworks such as *Wave UFO* (Mori 1999-2005) presents the viewer with is an expression of a fixed narrative. This narrative centres on a bodiless digital utopianism and the interaction with a body threatens the integrity of the narrative. If the body interacts with the artwork, besides the allowed interaction of the brain, which is construed as primarily housing the mind, then the artwork and narrative it presents might be subject to change. Change is a threat to the integrity of the narrative and thus so is the body.

Individuals that are branded as victims are usually selected from marginal groups or the margins of the community (Enders [sa]:2).[110] As far as the Cartesian split is concerned, it marginalises the body, opening the body up further to victimhood. When the body is considered as an object instead of a subject it becomes isolated from the personality or identity (Hammer 2004:288). The isolation of the body from the self makes it marginal; it is placed within a hierarchy which allocates it to the side-lines. A gap is created between the body and the subject (Bordeleau 2011:168), making the body vulnerable. However far removed from the self, the body is still acknowledged as being within the margin of what constitutes the self. De Vingemont (2004:1) explains that the body is simply so low on the hierarchy of what constitutes the self, according to the Cartesian split, that it barely occupies the background.

Being still a part of the self, the body is of the self and can thus be linked to a crisis concerning the self. Connections between the body and the self may be said to mirror the relation between the scapegoat and community. The body is related to the self close enough to resemble the self and so as to be a substitute for the true self, while not being so closely connected to the self so as to be confused with it.

In order to maintain such a distance, and further hide the connection between the community and victim, the victim, in this case the body, is demonized or described as monstrous (Wistrich 1999:8). Because the body is marginal it can also become liminal.[111] The liminality of the body can consequently also connect it to the monstrous (Nuzum 2004:208). Just as the scapegoat is depicted as being monstrous in order to justify its demise as well as marking it as a victim, so too the description of the body by cyber writers can be seen as monstrous.

In this sense, monstrosity is connected to revulsion and the challenging of the established order (Baumgartner & Davis 2008:1). In the case of the body, it is often made to appear monstrous through its connection to the abject. The abject transgresses boundaries, as the monster does, and thus is a symbol of the lack of difference and the chaos associated with it (Magistrale 2005:7). Abject aspects of the body are emphasised and elaborated in cyber writings. By referring to the body as "meat" (Brians 2011:142), it is not only further designated as an object rather than a subject, but also a repulsive and dangerous object.

The abject nature of the body is designated as breaking immersion and not only imprisoning the mind, but the prison is now further described as repulsive. The attention of an immersed individual is pulled back to the body (Featherstone 2000:610), this could be due to the body's needs such as eating and

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[110] The marginality of the victim ensures that it is not avenged (Chaplin 2014:40). The victim is still, however, part of the community and needs to be so in order to be a good conductor of violence (Golsan 2002:[sp]).
[111] Liminality and marginality are not interchangeable; however, marginal spaces do often play host to liminality (Menotti 2012:322).

excreting. These needs are described as carnal and abject (Smelik [sa]:[sp]). They are all the more because they cannot be fully controlled or suppressed by the mind.

Not only does the body need to engage is such abject activities as excretion, but it may also become ill. Illness is related to the abject as it stands outside of the norm (Nutter 2014:4). It infringes on what is considered clean and healthy, but mostly it is abject because it may be connected to the body's mortality (Pentony 1996:[sp]). Illness and excretion can be viewed as indicating the decay of the body or the eventuality that the body will become the ultimate abject object, a corpse (Kristeva 1982).

A cadaver and proximity to a cadaver, allows those who are near it or who view it to become aware of their own mortality (Rudge & Holmes 2004:3). Part of the vision presented by cyber-utopians is that of a virtual world where there is no death (Dinello 2005:172). In this world, those who participate cannot die; they are rendered immortal (Hayles 2002:309). The main reason for this immortality is the abandonment of the body. The virtual body that is inhabited in place of the real, dying body, can be infinitely changed yet never truly be outside of the true self's control. Without a body that is constantly abject and which will not decay into a corpse, the cyber-utopia is pollutant free and thus perfect (Harpold & Philip 1999:18).

The body can further be marked as a victim due to the fact that it is seen as an agent of pollution. The scapegoat must be killed or removed from the community since it is viewed as the cause of pollution (Raeside 2007:160). Similarly, the body may be marked as a victim since it can be viewed as the cause of pollution and death. Pollution, that is, impurity, is often the greatest reason to perform sacrifice (Henrikson 2009:258). Girard (1986:28) connects impurity in communities to violence. Klawans (2006:25) goes so far as to say that Girard equates violence and impurity.

Impurity can be connected to violence as both present situations in society that indicate a loss of difference and thus order (Duschinsky 2014:250). The cause of such an impurity must then be rooted out, that is, sacrificed. Impurity is also associated very strongly with the body in cyber writings. Lupton (1995:479) writes that transcending the body must be accomplished so that humans may have a pure relationship with the machine. Through this statement it is implied that not only is the body stopping people from partaking of something pure, but that it is the body's intrinsic impurity that disallows this. The impurity of the abject body must thus be removed in order for the human to become truly pure.

Impurity in the body is also connected to discrimination and victimisation, as well as violence in cyber writings. Schildkrout (2004:319) describes cyber-utopia as a place where one can be raceless, genderless, and ageless. These trademarks are sought to be excluded from cyberspace since they are predefined victim's marks. Discrimination is believed by this view to be based on race, age and gender, taking as example discrimination against racial minorities, women, as well as the elderly

(Weiss 1999:7). What it does not take into consideration is that through naming such victim's marks, it has already identified that which carries and cannot be separated from such marks, that is, the physical body.

The physical body may be viewed as carrying the mark of a scapegoat since it allows for a level of differentiation. Through the victim's mark the community can distance themselves from the surrogate victim, it marks the scapegoat as Other to them (Calvó-Armengol & Goitia 2007:8). Victim's marks are often overemphasised or presented as disfigurements in order to further separate them from the community (Klindienst 1990:20). This is because, as previously discussed, the victim is actually not so different from the community and this fact must often be covered up so that the mechanism of sacrifice can work (Girard 1986:25). Not only is that which separates the body from the mind emphasised in cyber writing, but also that which separates other bodies from each other. Physical traits that differentiate individuals are emphasised in order to argue that all such markers of identity should be excluded.

In order to avoid physical victim's marks causing strife or victimisation in cyberspace, the solution appears to either hide the body, or, in the cyber-utopian sense, abandon the body completely (Croxall [sa]:1). All of the various victim's marks have been grouped together, their individual differences, which designated them as victim's marks to begin with, are lost.

The body as a concept, according to Penfield (2015 [1978]:53), is a construct that is culturally determined. Penfield (2015 [1978]:53) points out that the term 'the body' is a generalization which is composed of different samples, but on the whole overlooks individual bodies since all bodies deviate from the norm[112] to a certain extent. The individual body is thus spared victimisation as the blame is transposed onto the abstract concept of 'the body'. Instead of isolating or responding to the human behaviour which attracts people to victimising individuals or groups bearing such marks, a surrogate is blamed.

Wave UFO (Mori 1999-2005) acknowledges the body as bearing a victim's mark by aiming to side-line the body in the art project. The aesthetic of *Wave UFO* (Mori 1999-2005) concerns science fiction as well as Mori's vision of the future, which, as discussed[113], is highly utopian and technological (Contemporary Art 2015:[sp]). The specific aesthetic chosen by Mori (Figures 1, 6-9, 14 & 16-18) can be considered clean, which according to Kozka (2010:7), is an attribute that is associated with utopia. In other words, the environment presented is meant to be perfect, that is, clean and devoid of the evidence of bodily occupation of the space. Not only is the body not presented virtually, but the physical aspect of the artwork also aims to limit the impact of the body on the space.

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[112] The norm is generally asserted as the white, heterosexual male (Vincent, Parrot & Peterson 2011:[sp]).

[113] In chapter two: *Immersion and Cartesian Dualism in Relation to* Wave UFO *and* The Chrysalids (22-48), Mori's utopian motivations are discussed in dualism in 2.5. Wave UFO's *conception and cyber-utopia* (35-37).

An example of the way in which the physical body's effect on the inside of the UFO is limited is the white slipper socks participants are required to wear (Ryan 2003:[sp]). Evidence of this can be seen in Figure 17, which shows the participants wearing the foot gear provided. Through the inclusion of this precautionary behaviour, one may read the handing out of socks to participants as a way to stop them from tracking in dirt.[114] Goretti (2011:29) describes *Wave UFO* (Mori 1999-2005) as an "ideal architecture". This ideal architecture (Goretti 2011:29) generates the notion that it is not a lived-in pace. It is not suited or designed to be accommodating of the body, with the exception of the Technogel bed, which leaves the body virtually immobilised (Figures 14 & 18). A perfect structure as envisioned by Mori seeks to erase the body's presence and the consequences of the body.[115]

Figure 17: Mariko Mori, *Wave UFO*. 1999-2005. Fiberglas, Technogel, Acrylic, Carbon fibre, Aluminium, Magnesium and Digital media, 4.93 x11.34 x 5.28 m. Madison Avenue, New York. (Pinchuk Fund 2008:[sp])

The third stereotype of persecution as it applies to both cyber-utopia and *Wave UFO* (Mori 1999-2005) can thus be surmised as present in both cases. Cyber-utopia and *Wave UFO* (Mori 1999-2005) both consider the body as impure. Cyber-utopian writings state this outright, whilst *Wave UFO* (Mori

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[114] The notion of removing shoes may also be related to the Japanese tradition of removing shoes before entering homes (Kigawa 2003:4).
[115] The beds present in *Wave UFO* (Mori 1999-2005) mean to provide comfort in order to create a better state of immersion. What this also implies, however, is that the body is so weak that standing for the duration of the video will draw the attention of the viewer away from the projections, and back towards their paining or discomforted bodies. The body needs to be coddled due to its fragility, and lying down is the best way to avoid discomfort. Just like the scapegoat, the body is too weak to put up any sort of fight.

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1999-2005) infers the body as dirty through the use of slipper socks. The body as abject is also indicated by cyber-utopian thought as it views the body as meat which disrupts immersion. Similarly *Wave UFO* (Mori 1999-2005) associates the body with dirt and pollution. The body as carrying a victim's mark though its class, race, gender and age, is acknowledged by cyber-utopian thinking and the body is thus hidden in *Wave UFO* (Mori 1999-2005).

4.3.4. Sacrifice of the body in *Wave UFO*

Violence concerning sacrifice is Girard's fourth stereotype (Callens 1993:154). The actual sacrifice of the body may be discussed in two ways. Firstly, the passivity of the body and the level to which it is excluded from the virtual realm, and secondly, cyber-utopian myths which propose a kind of 'mercy death' or permanent removal for the body (Muri 2003:73). I argue that the passivity of the body can be equated with the expulsion of the sacrificial victim from the community. The proposal to actually kill the body off can instead be viewed as the proposed killing of the sacrificial victim.

Passivity concerning the body's interaction with cyberspace and virtual reality differs from system to system. Some systems still rely on the body's physical movements in order to foster interactivity (Stern 2013:181). Such systems, however, may try to censor some of the body's input. In the case of Mori's *Wave UFO* (1999-2005) the body is passive to the extreme. This can be seen in Figure 7 and 14.

Wave UFO (Mori 1999-2005), through its inclusion of Technogel beds, shown in the image below as well as in Figure 17, may be viewed as encouraging the passivity of the body (Prpa, Riecke & Muicin 2015:[sp]). Technogel is meant to be a highly comfortable substance as described by its marketers at Technogel Worlds (2014:[sp]). The notion of providing the body with comfort may be viewed as an attempt to deprive the body of other forms of input so that it does not cause the participants to break immersion. No data gloves or artificial stimuli are provided for the senses except for the aesthetic visions of *Connected world* (1999-2003) (Figure 7, 8 & 16) and its accompanied sound(s). *Wave UFO* (Mori 1999-2005) aims to limit the body's involvement to brain activity, sight and hearing, with no other bodily senses involved. The other senses are not artificially stimulated, but rather completely left out.
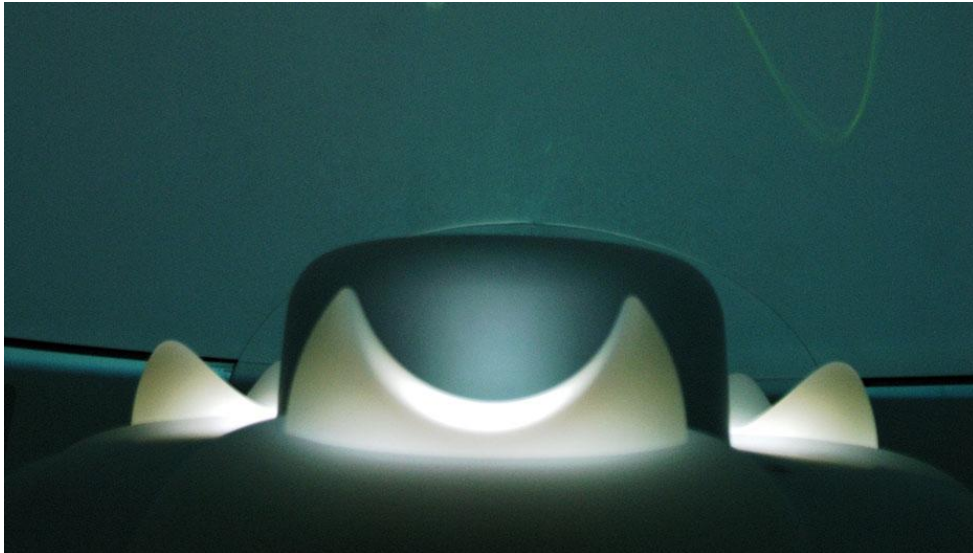
Figure 18: Technogel bed in *Wave UFO* (1999-2005), Mariko Mori, *Wave UFO*, 1999-2005.
Technogel. Madison Avenue, New York. (Technogel 2015: [sp]).

Connected world's (1999-2003) (Figure 7, 8 & 16) abstract shapes contain no virtual body or image of a body. Virtual bodies are often used in virtual reality as well as new media art in order to better create a sense of presence in the virtual world. The user of the virtual reality system usually associates with the virtual body provided, and is often better orientated in virtual reality (Slater, Usoh & Steed 1994:2). The better the participant can match their physical body with the virtual one, the better the immersion (Dolezal 2009:220). Providing a user with a virtual body implies that the user is presented with a familiar body image (Slater, Usoh & Steed 1994:2). No matter the race, age, gender or disability, the basic aspects of the body that the user has previously experienced may be transposed onto the virtual body.

The presence of a virtual body in a virtual reality system thus allows the viewer to be more immersed (Slater, Usoh & Steed 1994:2), but only because he/she can make better meaning of events through referring back to their actual body's experiences (Merleau-Ponty 2005 [1945]:72). A virtual body cannot help but refer back to an actual body in order to have any meaning (Gallager 2005:5). *Wave UFO*'s (Mori 1999-2005) exclusion of a virtual body or any body-image, may be viewed as an attempt to further remove participants from their bodies.

Not only are undesired aspects of the body and bodily experience excluded from *Wave UFO* (Mori 1999-2005) through the passivity of the body, but the virtual image of a body is also excluded. This exclusion then marks the fourth stereotype of persecution as the body is seen as separate from the self and through the virtual reality involved in *Wave UFO* (Mori1 999-2005) an aim is posited of removing the body further from the self, which makes it vulnerable the narrative of sacrifice contained in the cyber-utopian myth.

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4.4. The four stereotypes of persecution in *The Chrysalids*

4.4.1. The loss of difference and *The Chrysalids*

The Chrysalids (Wyndham 1955) can also be interpreted as containing the first stereotype of persecution. The first stereotype of persecution is discussed as being present in the novel in two ways. Firstly a loss of difference is encountered in the community of Waknuk, as mutations spreads unchecked. Secondly, a loss of difference occurs when the telepaths and Fringes' mutants are not differentiated by the people of Waknuk.

In *The Chrysalids* (Wyndham 1955) the first sacrificial crises originates from the loss of difference concerning mutations in Waknuk. The mutations of crops and animals are seen in Waknuk as punishment from God (McLeaish 2012:4). The random occurrence of the mutations can be viewed as being as indiscriminate and devastating as the Plague[116] which Girard (1986:2) uses to explain the loss of difference and the crisis it brings about.

When the farming community is subjected to a wave of deviations or mutations, farmers from rich and poor families alike find their crops and animals mutated. From the very high ranking, such as Joseph Storm (Wyndham 1955:17), to poorer, less distinguished members of the community. To purge the community and please God in a form of sacrifice, the crops are burned and the animals slaughtered (Krátký 2015:38). This indicates a substantial loss of income and livelihood for individuals within the community.[117]

Community members very closely monitor each other as well as their livestock and crops. This is because if a person should keep a mutated individual or animal it invites punishment from God onto the whole community (McLeaish 2012:4). Secondly the community members are in a continuous state of reciprocal violence as each member aims to accuse the other of having a mutated plant or animal, resulting in disputes and strife between community members.[118]

What is also of interest to this study is the fact that the Waknuk community strives to uphold the "norm". The 'norm' is obsessed over and dearly strived towards, put forward as an almost godly ideal (Jabarouti & Hardev 2014:448). This would also indicate that the inhabitants of Waknuk strive, as many with a utopian goal, towards eliminating difference. The deviance of difference, through

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[116] The Plague, or Black Death, is used by Girard (1986:2-3) to indicate that people from all social classes are killed indiscriminately. No difference thus exits for the plague between individuals of low social status or high social status, society's structures are thus threatened by this.

[117] The mutation of humans within the community can similarly be described as not differentiating between rank, class or religious devotion. In Waknuk if a woman has borne more than two mutated children her husband has the right to divorce her and marry again (Gomm 2001:1). Being divorced from one's husband is portrayed as a tragedy as well as a loss of stability, care and income.

[118] An example of this is Joseph Storm's feud with Angus Morton over his 'great-horses' (Wyndham 1955:35-36).

mutation, is in the end that which causes the community to lose differentiation between themselves. Just as with cyber-utopian writings, focus is placed on the similarities between community members, not their differences, since any difference might indicate mutation.

Described above are the initial circumstances which leads to the mutants, such as Sophie, being expelled from the community in order to please God and purify Waknuk. The second crisis leading to Sophie being killed is concerned with a lack of difference between Sophie, the telepaths as well as the other mutants.

David and the other telepaths become viewed by the Waknukians and the Governing body as mutants (Krátký 2015:38). That is: they are not differentiated from the physically deformed, and in many cases abject, mutants. This notion can be drawn back to the discussion of the telepaths being more closely associated with the mind. The loss of difference between themselves and the mutants would then indicate that no distinction is made between the mind and body, which, in this instance is shown as leading to grievous violence. The telepaths are about to be rescued from their situation, but at the point before Sophie's death, they are seen as part of a larger body of mutations (Wyndham 1955:195).

It can be concluded that the first stereotype of persecution may be viewed in *The Chrysalids* (Wyndham 1955) as the loss of difference that the rampant mutations warrant in Waknuk. Furthermore a loss of difference can be seen when the community of Waknuk decides to punish all the Fringes mutants, lumping the telepaths in with the rest of these individuals.

4.4.2. Crimes against the community in *The Chrysalids*

The threatening of the established order through events that become associated with crime can be seen in *The Chrysalids* (Wyndham 1955). Through being physically deviated mutants challenge order, associating them with crime. The notion of crime as disregard for order is also demonstrated by Sophie not only as a mutant but also by her implied killing of another mutant.

Order is of the essence in the hostile and mutated world of *The Chrysalids* (Wyndham 1955). This order can be ascribed to the purity laws which the people believe have been ordained by God (Wyndham 1955:39). What is pure is what is/was created by God, which is here understood as the image of man[119] which is painstakingly defined. In relation to this, mutants sully the purity of the community, inviting a collapse into chaos. What falls under the focus of this subchapter is that the mutants' physicality becomes part of their crime. This 'crime' is to sin against God by being "Blasphemies" (Jabarouti & Hardev 2014:449). Mutants are thus placed in the antithesis of order,

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[119] Women are regarded with suspicion and the government had to have statements circulated that defined what a woman should look like since she was not created in the image of God according to the literature used in *The Chrysalids* (Wyndham 1955:11).

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which is expressed in *The Chrysalids* (Wyndham 1955) as the devil.[120] The physicality of mutants like Sophie is thus problematic, being already more strongly associated with the body.

The blame and general attitude towards mutants are relevant since it also includes the attitudes fostered towards Sophie by the Waknuk community (with the exception of David). Sophie's sixth toes, which identifies her as a mutant, thus also becomes a crime in the sense that the community sees it as a threat to the order they have worked hard to establish. Sophie is seen as a threat to the extent that the inspector is called out to try and find her and her family (Wyndham 1955:50), even though she is, like most scapegoats, essentially powerless and innocent (Andrande 2012:[sp]). Sophie's separation from the community through fleeing is not enough, the officials go through a considerable amount of trouble, interviewing David[121], and getting local inhabitants to form search parties, in order to find her, sterilize her, and send her to the Fringes.

When Sophie reappears later she challenges the established order in another way. The mutant community in the Fringes has no compassion for the telepaths (Wyndham 1955:162). Sophie defies the established norm in the Fringes wilfully as she demonstrates compassion. Sophie did not fit in the community of Waknuk, but she is also not entirely at home amongst the mutants of the Fringes. She remains an outsider even as she seems to become part of David's group, due to the fact that she is not a telepath.

Sophie's inability to fit in, even with the community in the Fringes, is demonstrated when she rescues Rosalind and Petra from the Spider man/Gordon through killing another mutant. Sophie shows no remorse regarding her murder and starts washing her bloodied garments (Wyndham 1955:174-176). In this way the reader is made aware of how different Sophie is to the telepaths. Sophie comes to represent the whole of the mutated community in this way. Although mutants might have human qualities the lives they have been forced to lead has changed them. When Sophie is thus killed along with the other mutants it is seen as more justified.

It can be concluded that the second stereotype of persecution is strongly associated with Sophie in *The Chrysalids* (Wyndham 1955). As a mutant Sophie's physical deviation from the norm indicates her as a threat to the established order. Furthermore, Sophie actually commits a crime by killing a mutant, in this way indicating her disregard for the order in the Fringes community of mutants.

4.4.3. The markings of victims in *The Chrysalids*

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[120] This can be seen through the framing of phrases from the main religious text (*Repentances)* in the inhabitant's homes. These include: 'The Devil is the Father of all deviation' (Wyndham 1955:18).
[121] David refuses to cooperate with the inspector, thus his father whips him to get the information (Wyndham 1955:52).

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Victim's marks are of particular relevance to *The Chrysalids* (Wyndham 1955). This subchapter considers the physicality and otherness of the mutants presented in the narrative as being victim's marks. Special emphasis is placed on Sophie and how her victim's mark can be identified as her sixth toes.

The Chrysalids (Wyndham 1955) portrays the mark of a victim as a weakness. Any individuals that can be visibly defined as a mutant is removed from the community (Krátký 2015:3). The mutation is an example of a victim's mark as it is wholly apparent and allows the person to be easily identified as Other. Usually the mutation is small, like an extra toe on each foot, as with Sophie (McLeaish 2012:23), but this is enough to cause the community to expel such a person.

A relationship is created between a physical defect and the state of the world at large, which is punished by God, bent and ultimately evil. The mutant, due to this imagined connection becomes blamed in some way for the deviations and mutations of the entire world (Storrs 2004:12). The mutant in itself is not extreme in its deformity, but through a small deviation becomes linked to the extreme deformity of the world.[122] Any mutant's physical otherness becomes viewed as evil.

Victim's marks designates an individual as Other (Storrs 2004:23), this is prevalent in *The Chrysalids* (Wyndham 1955). The norm in Waknuk consists of a body that has been held up to the description of a proper body as elaborated from the Bible in this instance (Krátký 2015:38). The norm that establishes itself in Waknuk is not only that of a proper body, but more importantly a male body. Anything that falls outside of this norm is regarded with suspicion. For an individual like Sophie this means that she is doubly suspicious. Not only is she firstly female and thus Other, but also a mutant.

Being other to the norm implies that Sophie, is part of a group that is inferior and hostile, as regarded by the Waknuk community and he telepaths (Gagnon 2012:3). Through choosing another, like a mutant, as a scapegoat, the community is able to distance themselves from their own guilt in unleashing the violence that now terrorises the community (McGrath 2013:4).

Wyndham starts *The Chrysalids* (1955) off with first introducing Sophie as a friend of the main character, David. At first David does not even realise that Sophie is a mutant even though he sees her sixth toes (Wyndham 1955:10). This is because David has come to expect that a mutant would be vastly different from himself.

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[122] Scapegoating usually concerns those who are part of a group that falls within a category of extremes (Storrs 2004:12). That is to say that victims are usually chosen from a group that is extremely rich/poor, ugly/beautiful etc. Mutants in *The Chrysalids* (Wyndham 1955) at first do not belong to any extreme. Their deformity does not make them extremely ugly in general (Wyndham 1955:159), and their birth is not limited to a certain class of person. The community however immediately links the mutation to a punishment from God. This classifies the mutant as belonging to an opposing class of people, the polar opposite of those with proper, regulated bodies created in the image of God.

To make up for the lack of difference, the scapegoat is demonized and the difference exaggerated. (Douard 2009:39). This is apparent in *The Chrysalids* (Wyndham 1955) as the Fringes people are portrayed as monsters. *Old Maggie* and *Hairy Jack* serve as tales to scare children into behaving as they eat naughty children or smack them (Wyndham 1955:21). These tales of monstrous people also initially stop the telepaths from penetrating into the Fringes out of fear of these creatures. The actual people of the Fringes are of course not as severely deformed (Wyndham 1955:159).[123]

Mutations are further described as imperfect imitations, created by the Devil to tempt people away from purity (Wyndham 1955:55). Through this belief the mutant is once again subjugated to a lower order being. Not only is it evil, but it is merely an imitation of a person, not a true person at all. The imperfection, that is the visible mutation, such as Sophie's sixth toes, is a mark which identifies such imitations. Such an imitation as well as visible deviation is described as disgusting (Wyndham 1955:53). This indicates that mutants must be identified and removed before its pollution can corrupt the 'pure' community.

Through linking the mutants to the abject, their monstrous natures are also further exaggerated. In Waknuk there is a "Purity rate", referring to the amount of crops, livestock and people who do not deviate from the norm (Wyndham 1955:42). The higher the purity rate is the more the forces of evil are thwarted (Wyndham 1955:42). This implies not only that the mutants are evil, the devil is said to be the father of all deviation, but that they are impure. This notion of the mutants as impure also implies that they are agents of pollution. When Sophie is thus expelled from the community as a child it is because she is seen as being able spread her pollution, which is deviation, to those in the community.

Sophie's deformity marks her as polluted, but also as abject (Diken & Laustsen 2005:113). In order to stop her from spreading her pollution the authorities have her sterilized before sending her away to the Fringes (McLeaish 2012:23). Sophie's body as both female and deformed read as monstrous and out of control. The spread of pollution is stopped as Sophie cannot have children.[124]

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[123] When David points out that deviations do not look the way he was lead to believe, the inspector assures David that no matter the degree of deviation it is still a blasphemy (Wyndham 1955:55). The inspector tells David that those who are mutated have no souls (Wyndham 1955:55). Not having a soul implies that the mutant is not really a human, that killing it, or sterilizing it, is not really a crime.

[124] The notion of Sophie as sterilized also raises the issue of menstruation. Kristeva (1982:70) writes that menstruation, as with other abject substances, points out the frailty of the established order. Sophie's sterilization is thus a reordering of her disordered body. It is the attempt of the established order to defend itself. Menstruation blood, concerns a danger that comes from within (Diken & Lauststen 2005:118). This adds to Sophie's status as abject and monstrous. The authorities do nothing about her sixth toes, but stops the continuation of this mutation. Sophie's womb becomes seen as the ultimate polluter and is thus 'purified'. David's father describes the need for the expulsion of mutants as follows : '...a baby...which would grow to breed, and breeding, spread pollution until all around us there would be mutants and abominations.' (Wyndham 1955:181).

Sophie's relation to the abject has changed when David and the other telepaths meet her in the Fringes. She can no longer pollute the 'pure race' through having children, but she herself is now abject in another way. Her clothes are ragged and stained with strange substances (Wyndham 1955:176), she wears no protective cross associated with purity (Wyndham 1955:176), she cries (Wyndham 1955:177), expelling bodily fluids, she is grimy and at some point covered in blood (Wyndham 1955:175). Sophie's body has become more polluted and thus capable of polluting in another way.

In contrast to Sophie's marks and following abjection, the telepaths carry no visible victim's marks. They pass as normal for many years before having to flee (Adam 2011:239). Not being physically deviant thus places them in another category as the mutants. Since they are physically sound they are not linked to the abject as strongly as the mutants and it can be argued that they are rather connected to the mind. The sacrificial victim is thus not a telepath, but a mutant.

Sophie and the mutants in *The Chrysalids* (Wyndham1955) are also selected as scapegoats due to their marginality. When a mutation is identified it is automatically assigned to a group that has no place in society. Wyndham takes it one step further by locating the actual group of mutants in the Fringes: literally a on the margins/fringes of society. Before Sophie is captured and sent to the Fringes, she and her mother and father already occupy a marginal space in society. Their house is apart from that of others and they take care to keep themselves separate from the suspicious Waknuk community. Upon David's first meeting with Sophie, he is surprised by the fact that he does not recognize her as the entire community often gathers (Wyndham 1955:7). When Sophie and her family are perused by the authorities it also means that due to their separation from the community there is no one to defend then, except David.

The Chrysalids (Wyndham1955) can thus be said to contain various instances of victim's marks. The mutants in the novel are marked by their physical deformity as well as their otherness which results in them being sent to the marginal space of the Fringes from where they are demonized to legitimize their expulsion. Sophie in particular is marked by her sixth toe as well as her abject appearance later on in the novel.

4.4.4. Sacrifice in *The Chrysalids*

The Chrysalids (Wyndham 1955) portray the final stereotype prominently. Violence to the scapegoat, or expulsion of the scapegoat from the community can be seen at various intervals in *The Chrysalids* (Wyndham 1955). Emphasis is placed on Sophie as being portrayed as a sacrifice through her expulsion from the community as a child as well as her death at the end of the novel.

The way that crops as well as livestock are treated foreshadows the way mutants are treated in this novel. When stock on the farm where David grew up would mutate, his father would let them all kneel and pray for forgiveness (Wyndham 1955:18). Following their repentance the whole of the inhabitants on the farm would gather to watch as the animal is 'ceremoniously' slaughtered (Wyndham 1955:19). Deviated crops are treated in much the same way as deviated animals, since these are burnt down whilst everyone sings hymns (Wyndham 1955:19).[125]

The events that follow, concerning Sophie, acts in the same manner as would the coming together of a community to dispose of a scapegoat. When it becomes common knowledge that Sophie is a mutant and that David protected her, his father is extremely angry and associates David with Sophie's apparent demonic nature (Wyndham 1955:52). One might interpret this to mean that Joseph Strorm sees David as contaminated by Sophie's evil or abject state. He whips David, which may be read as an attempt to purify his son.

A further attempt to not only purify David but the whole of the community is Joseph Storm's further actions. The inspector tells David that due to his father's action David's name will be left out of his official report (Wyndham1955:56). Through this statement one is lead to assume that David's father has gathered the community to search for Sophie and her parents.[126] This may be read as a type of sacrifice as the community has gathered to expel Sophie and her parents.

When Sophie reappears to help the telepaths she may be seen as sacrificed a second time. The Fringes mutants and the Waknuk community have been engaging in skirmishes and raids for many years (Wyndham 1955:20). This may be read as reciprocal violence as these two communities continually inflict violence on each other. David himself describes the exchange of violence between the two communities as unorganised and mostly unplanned (Wyndham 1955:33). The whole of the Waknuk community gathers to initially apprehend the telepaths, but as their numbers grow and they begin to penetrate the Fringes they decide to take on the whole of the mutant community (Krátký 2015:42). All of the petty differences that have divided the community in the past are forgotten as they swell into a mob.

Sophie as a scapegoat is emphasised by her death, which is caused by the Waknuk community (Wyndham 1955:187). The scapegoat is that which takes the place of the truly guilty, or those who were meant to receive punishment to begin with (Girard 1986:63). The violence that is unleashed anew between the Fringes mutants and the Waknuk community is because of the telepaths. The surge of violence was intended initially for them. Although the telepaths do not engage in violence, the woman from Sealand, who represents a collection or community of telepaths, does (Wyndham

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[125] David has a nightmare that Sophie is treated in the same way as the livestock: dragged to the yard and killed in the sight of the farming community (Wyndham1955:28).

[126] Sophie and her parents are found by an unrelated group (Wyndham1955:56).

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1955:195). Sophie is only a part of the various sacrifices amongst both the Waknuk and Fringes community. What makes her a true sacrifice is, however, her innocence in the larger matter at hand.[127]

Sophie's death is further considered a sacrifice since her death coincides with an end to violence. The death of a sacrificial victim or scapegoat channels the violence in the community and as a result its death or expulsion allows for the return of peace (Newell 2012:93). After Sophie dies the telepathic group is transported to a utopian telepathic city, which is described as being dreamlike, where it is implied there is no persecution or direct violence (Wyndham 1955:200). Sophie's death, along with that of the other mutants, can thus be read as allowing for the telepaths entering into a peaceful society.

Sophie can thus be viewed as a sacrifice as per the fourth stereotype of persecution. Sophie forms part of the mutant group and thus their treatment, that is being expelled by the community, is also applied to Sophie. Furthermore Sophie's death can be seen as part of a sacrifice which designates that she take the place of the telepaths who were originally meant to be punished by the Waknuk community. Sophie's death also allows the telepaths to escape strife and enter a utopian city. Innocence is evident in Sophie's portrayal as a sacrifice as her deeds are not linked to the cause of the conflict which ultimately causes her death.

4.5. *Under Scan* as viewed through the four stereotypes of persecution

4.5.1. *Under Scan* challenging the lack of difference.

In what follows the lack of difference, which is sought after in the cyber-utopian myth, is discussed as circumvented through the phenomenological underpinnings, pertaining to embodiment, of *Under Scan* (Lozano-Hemmer 2005-2008) (Figure 4, 10-12 & 19). *Under Scan* (Lozano-Hemmer 2005-2008) is considered in relation to its emphasis on difference which avoids the loss of difference and creation of a sacrificial crisis.

The notion of total immersion into a utopian-like world seems to be dependent on the difference between the body and mind. If there is no difference between the body and the mind, then the mind cannot ever have a chance of being separate enough from the body to escape. The mind will then

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[127] Both Gordon and Joseph Storm come to represent the opposing groups. Joseph is described from the very beginning of the narrative as a violent man, easily angered and often seeking revenge outside of the law on deviations (Wyndham1955:37). He even goes so far as to peruse his own son and daughter into the Fringes with the purpose of either killing them or handing them over to the authorities where they will be tortured. Gordon is shown as a slightly more reasonable man, but he is hateful, filthy and plans to rape Rosalind (Adam 2011:239). He is finally also shown as violent when he fights the Waknuk community (Wyndham 1955:186).
In relation to these two characters Sophie is represented as innocent. First, as a child, the reader's attention is drawn to her strong character and sweet nature. It is only when she is fully grown up that she actually kills someone in order to save Rosalind and Petra (Wyndham 1955:175). Usually this would remove her from the position of scapegoat, but it does not.

simply die with the body and decompose with it. Cyber-utopian writing thus has to assert and reassert the difference between the body and mind, since if this difference is lost, immersion into utopia is threatened. Phenomenology, although acknowledging that the mind and the body are not the same, notes the interconnected nature of the mind and body (Keat2013:1), lessening the difference between the two.

New media artworks that have phenomenological underpinnings, that indicate the body, are often not utopian, but rather focus on the immediate natures of human beings, which includes embodiment. Through the focus on embodiment such new media artworks rather highlight differences, instead of hiding it. Lozano-Hemmer demonstrates the focus on difference as well as the denial of a cyber-utopian desire for the loss of difference.

Blackman (1998:136) states that when utopian visions concerning technology are challenged, a focal point for such criticism is usually directed towards surveillance. Blackman (1998:136) further elaborates by indicating that technology is often linked with the notion of the Panopticon[128] as individuals across the board find themselves monitored by governments and police agencies. Surveillance often does not differentiate between individuals and subjects individuals from across social and cultural spheres to the same treatment, especially in public spaces.

Part of *Under Scan* (Lozano-Hemmer 2005-2008)'s relationship with public space, is the notion of surveillance often encountered in Lozano-Hemmer's work. In other work by Lozano-Hemmer, such as *Surface Tension* (2004), the artist points out the hegemonic nature of surveillance (Paul 2015:186). *Under Scan* (Lozano-Hemmer 2005-2008) is also concerned with surveillance (Schülke 2007:[sp]). The dream of the national security state is symbolized by the tracking lights which might let the participants appear as fugitives, but ultimately *Under Scan* (Lozano-Hemmer 2005-2008) undermines the notion of totalitarian surveillance (Ravetto-Biagioli 2010:125).

The Panopticon as model for surveillance is destabilized in *Under Scan* (Lozano-Hemmer 2005-2008) as it does not reinforce a need for those who are being surveyed to discipline themselves or cohere to rigid social conventions (Ravetto-Biagioli 2010:125). Instead the surveillance becomes the vehicle of a new embodied experience, which allows individuals to deviate from everyday routine and experience an intimacy with the presented video portraits (Fernandez 2007:84) (Figure 4, 12 & 19). *Under Scan* (Lozano-Hemmer 2005-2008) can however make participants more aware of their daily routines and how they are surveyed during this time. This indicates that Lozano-Hemmer makes his

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[128] The notion of the Panopticon originates in Michel Foucault's writings on space and power, *Discipline and Punish, Panopticism*, written originally in 1975. The notion of the Panopticon concerns the design of a prison system which gives the authority of the prison an optimum view of the inmates (Winokur 2003:[sp]). The notion of the Panopticon is often related to the notion of surveillance in contemporary society, specifically concerning the notion that those who are being watched are disempowered whilst those who watch are empowered (Simon 2005:3).

audience aware of their differences through singling them out in a public space, their anonymity is lost.[129]

Under Scan (Lozano-Hemmer 2005-2008) can be read as an artwork which points out the lack of difference created by surveillance and instead seeks to draw attention to difference. Focus is placed on the individual's interaction with this work.

4.5.2. *Under Scan* and the disruption of order

Unlike in cyber-utopian thought, phenomenology, as related to embodiment, does not set the body up as hampering the mind. Rather it accentuates the body and mind's interrelated and dependent nature. Instead of the body being seen as an obstacle it is instead viewed as the only medium through which the world can be experienced (Merleau-Ponty (2005 [1945]:64). *Under Scan* (Lozano-Hemmer 2005-2008) is discussed here in relation to how it focuses on the body as positive.

Under Scan (Lozano-Hemmer 2005-2008) includes and centralises the body, both through the recorder video portraits (Figure 11) as well as the interacting physical bodies of the participants (Figure 4, 12 & 19). Lozano-Hemmer, through *Under Scan* (2005-2008), expresses the notion that information can only be meaningful in so far as it can be made sense of by an individual (Kilch & Sheer 2012:180). This individual is thus also conceived of as embodied. Understanding digital, or other forms of information, relies on perception that is embodied (Merleau-Ponty 2005 [1945]:294). Embodied perception[130] takes into account that the participant is affected by the media whilst the media is in turn also affected by the spectator (O'Neill 2008:10). The participant, or spectator, is actively involved as they decode the meaning of the media through their senses.

Under Scan (Lozano-Hemmer 2005-2008) offers the embodied participant a uniquely important position. Without the participant's physical body there could be no artwork. The advanced tracking system present in *Under Scan* (Lozano-Hemmer 2005-2008) tracks individual bodies and shadows (Fernandez 2007:84). Only through a participant's physical proximity to a previously invisible portrait does the portrait activate (Fernandez 2007:84) (Figure 4, 10, 12 & 19). The body of the participant is thus the main means of making accessible the information inscribed in *Under Scan* (Lozano-Hemmer 2005-2008). The body of each individual comes to serve as a vehicle to further the artwork.

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[129] Lozano-Hemmer's *Under Scan* (2005-2008), as with many of his other *Relational Architecture* works, focuses on the relation of individuals to public spaces as well as each other through the provided media (McQuire 2009:57). Participation or interaction with works such as *Under Scan* (2005-2008) and *Body Movies* (2001) is not always voluntary (McQuire 2003:[sp]). A large number of people participate at the same time (Ravetto-Biagioli 2010:123). Those who are not physically being tracked by the artwork also become involved through viewing those who are participating as can be seen in where an individual whose shadow is being tracked is watched by a person whose shadow is not being tracked (Bounegru 2009:204).

[130] Embodied perception concerns how spectator and media interact, presupposing that it is chiefly through the fact that the spectator is embodied and draws on previous experiences (O'Neill 2008:10).

Under Scan (Lozano-Hemmer 2005-2008) aims to depict the body and body-image in a non-hierarchical way. Massumi (2007:90) explains that Lozano-Hemmer's *Relational Architecture* artworks, speculate on the lived experience in an aesthetic way. His works are meant to create experiences that are meaningful (Massumi 2007:90). What is essentially expressed is the desire for interaction on the grounds of bodily involvement in the world which is shared by the embodied nature of human beings. Instead of partaking in a limited manner in a set narrative, it is the physical interaction with the work that is meant to instead generate a narrative.

Interactive art is event based. This indicates that that it is reliant on those who partake in the relevant event, as opposed to having a definite beginning and ending (Stern 2013:181). Sullivan and Lozano-Hemmer, as quoted by Stern (2013:181) note that the *Relational Architecture* artworks focus on the relationships that the work generates between the involved individuals and the artificial, augmented, reality created. Lozano-Hemmer (2001:[sp]) states that he transforms the narratives of public spaces through his installations, allowing people to approach and relate to a familiar space in an "alien"[131] way.

The interacting individual in *Under Scan* (Lozano-Hemmer 2005-2008) is meant to be made aware that he/she still has agency. Stern (2013:181) notes that Lozano-Hemmer uses the term "alien-agency"[132] which refers to the notion that human beings can still feel effects and affect things in turn, but that they operate in an alien context provided by artworks such as *Under Scan* (Lozano-Hemmer 2005-2008). *Under Scan* (Lozano-Hemmer 2005-2008) creates an ongoing relationship with the public space that can continue and change after the artwork is taken down.

McLuhan (2001[1964]:14) states that through making people aware of the social and psychic concerns of the continued use of technology, technology and art perform the same role. *Under Scan* (Lozano-Hemmer 2005-2008) uses technology to criticize the use of technology through allowing for an embodied experience of that technology (Ceccetto 2008:79) (Figure 4, 10, 12 & 19).

The body as connected to the notion of hindering the mind is thus overturned by *Under Scan* (Lozano-Hemmer 2005-2008). The second stereotype of persecution is averted when the mind and body are seen as interlinked and focus placed upon the body as a vehicle for interaction and expression. *Under*

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[131] The world new is frequently replaced by Lozano-hemmer by the word alien to indicate that originality is impossible (Stern 2013:181).

[132] Public spaces are however not always familiar spaces anymore. Guertin (2012:103) explains that citizens are no longer represented by public spaces, but that public spaces rather present capital. *Under Scan* (Lozano-Hemmer 2005-2008) acknowledges this notion of capital and plays with it. It presents the video portraits and participants as ambiguous, referring to the outlines of bodies at crime scenes through the shadows of participants, as well as advertising through the video portraits (Ravetto-Biagioli 2010:127). The video portraits are however not aiming to advertise anything, they do not present a past event of vision of the future (Ravetto-Biagioli 2010:127). Meaning is generated with physical interaction and is thus particular to the individual who is interacting with the artwork.

Scan (Lozano-Hemmer 2005-2008) places the body as central to the artworks as it is a medium for interaction and performance, indicating its agency.

4.5.3. Victim's marks in *Under Scan*

What can be considered victim's marks that should be avoided by cyber-utopian standards is often purposefully included in new media artworks such as *Under Scan* (Lozano-Hemmer 2005-2008).This subsection discusses *Under Scan's* (Lozano-Hemmer 2005-2008) use of various bodies and video portraits as inclusion of differences which may otherwise be viewed as victim's marks. I argue in what follows that the focus on bodily difference allows the body to not be marked as a scapegoat.

In *Under Scan* (Lozano-Hemmer 2005-2008) the presented video portraits are of a diverse number of people (Avram [sa]:1) (Figure 11 & 12). The participants in *Under Scan* (Lozano-Hemmer 2005-2008) are thus confronted with not only actual people but also virtual simulations of physical people. These video portraits contain physical indicators of identity and difference, establishing itself as separate from the viewer, even if it is dependent on his/her body's shadow. This can be more clearly seen in Figure 19.

Under Scan (Lozano-Hemmer 2005-2008), through making use of the bodies of participants as well as recorded/virtual bodies, implicates the actual participants as performers (Buchanan 2009:270). Not only are those within the space given the chance to have a measure of control over the installation, but their status changes, becoming through their bodily involvement more than participants. The singling out of bodies, as well as the display of various digital bodies does not lead to those individuals being victimized, but rather it allows their status to change in a positive way. The connotation made to physicality and difference is thus positive. An example of this is shown in the figure below as spectators interact with the video portrait.

Figure 19: Rafael Lozano-Hemmer, *Under Scan*. 2005-2008. Digital media, Variable. Lozano-Hemmer 2013:[sp]).

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Interactive new media art often takes into account that the body can process information and imbue it with new meaning, changing the limits of the art project as it applies to the body (Goble 2010:8-9). Interaction may also amplify certain aspects of the body, in the case of *Under Scan* (Lozano-Hemmer 2005-2008), one might relate this to the shadow. Individual bodies' shapes and thus shadows allow for each experience to be unique and through performance posits the body as central to the artwork (Figure 4, 10, 12 & 19). The body is removed from its marginal position and vulnerability which allows it to be seen as a potential scapegoat.[133]

The body as carrying a victim's mark though its physicality and difference is thus subverted by *Under Scan* (Lozano-Hemmer 2005-2008). *Under Scan* (Lozano-Hemmer 2005-2008) presents difference through various video portraits as well as the inclusion of different shadows as central to this artwork. Lozano-Hemmer also allows the participants to become performers, through their various physicalities, in his artwork as opposed to having their bodily differences side-lined or hidden.

4.5.4. *Under Scan* and sacrifice

Sacrifice or exclusion of the body is argued as an impossibility when a new media artwork has phenomenological underpinnings which are relevant to embodiment. Through acknowledging the body as central to meaning making, the body cannot be excluded. This subchapter notes how *Under Scan* (Lozano-Hemmer 2005-2008) does not exclude the body, but rather extends it through the use of media.

The spectator in *Under Scan* (Lozano-Hemmer 2005-2008), is part of the artwork, he/she is placed in relation to a virtual body, allowing for a comparison of the real and virtual bodies (Ekman 2012:[sp]) (Figure4, 10, 12 & 19). The incorporation of a live and virtual performer allows spectators and participants to inspect how they relate to the real and the virtual (Kilch & Sheer 2012:188).[134] The virtual and real body do not merge, nor is either alone the origin of the artwork, but the relationship between both seeks to highlight embodiment (Munster 2006:4).

Instead of limiting the body through seeking to either hide it or leave it inactive, *Under Scan* (Lozano-Hemmer 2005-2008) extends the body. Through extension, that is the use of senses along with media that exaggerates these particular senses, certain aspects of the body become so exaggerated that it cannot be ignored or marginalized. Instead of cancelling out the body, new media artworks which incorporate bodies opens bodies up to more experiences (Munster 2006:33). Munster (2006:17)

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[133] Hayles (1999:2) explains that by viewing embodiment as dualistic, the pattern of information is privileged above the physical body, which is seen as simply an accident. *Wave UFO* (Mori 1999-2005) thus accommodates this 'accident' only as far as it grants access to the mind whereas *Under Scan* (Lozano-Hemmer 2005-2008) utilizes both body and mind.

[134] This is because the spectator's sense of presence is challenged by the virtual overlay provided by the relevant technology (Müller & Erbe 2007:46).

further explains that the virtual becomes more actual only when it can be related back to the physicality of the body, in this case the real body of the viewer is used to make sense of the digital body they are presented with.[135] This could be inferred from Figure 4, 10, 12 and 19.

The body is not removed from the system of meaning making, nor is any actual violence done to it. It can thus be concluded that the body is focused on to the extent that it is extended by the media in *Under Scan* (Lozano-Hemmer 2005-2008). *Under Scan* (Lozano-Hemmer 2005-2008) thus presents the body as something that cannot be sacrificed or abandoned.

4.6. *Chimera* and the four stereotypes of persecution

4.6.1. *Chimera* and the loss of difference

Chimera (Vári 2001) (Figure 2, 3, 15 & 20-22) is a new media artwork that strives to accentuate difference. This subchapter discusses Vári's challenge to structures that present uniformity with utopian notions that consider difference as threatening. Vári also goes against cyber-utopian ideals concerning the loss of difference. Vári's use of the body to critique and destabilise the utopian narrative behind the Voortrekker Monument through her artwork, *Chimera* (2001), is inspected in what follows.

The Voortrekker Monument is tied up with the utopian discourse surrounding Afrikaner Nationalism.[136] With the construction of the Voortrekker Monument, Ktarz and Rassool (2006:349) explain that what was sought was an enactment of utopia, a construction of a heterotopia[137]. The real sites and events referred to by the Voortrekker monument are inverted through their representation (Maithufi 2012:54). The desire to create or present a utopian depiction of history lead to the creation of a narrative that is unyielding and thus also excludes many relevant factors in order to maintain itself.

One such and exclusion is the exclusion of individual interaction, concerned with difference and meaning making, in the Voortrekker Monument itself. Maithufi (2012:54) explains how the public's interaction with the city can change the way the city is viewed. According to De Certeau (1984:102) the immobile order of a place is changed when people simply walk through that place, some parts become invisible, other places are exaggerated, thus fragmenting and distorting the place of

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[135] The recorded video portraits used in *Under Scan* (Lozano-Hemmer 2005-2008) are also particular to certain individuals (Science Museum [sa]: [sp]). There is no generic or ideal virtual body that is generated, but instead recordings of actual people performing individual tasks (Ravetto-Biagioli 2010:124). This manner of interaction is meant to create a type of personal encounter (Ravetto-Biagioli 2010:128).

[136] It is a narrative that begins with the colonial notion that European colonies could be a sort of paradise, thus carrying a type of utopian motivation (Hemer 2008:7). Colonialism is often described as intertwined with utopian ideals as it concerns the desire for either finding utopia or creating it through colonisation (Hardy 2012:123).

[137] Heterotopia refers to a space that is an actual space, as opposed to utopia, that can be viewed as an enacted utopia, but still consists of a mixed experience since it remains tethered to reality (Foucault 1986:24).

interaction. It follows that when individuals interact with the Voortrekker Monument they are already distorting and challenging its utopian identity. What Vári does is then to effectively invite people to be aware of the challenges their embodied interaction presents to the Afrikaner utopian narratives through *Chimera* (Vári 2001).

When Vári is confronted with a utopian ideal of immovable uniformity, she does not condone the lack of difference sought after, but instead aims to rupture presented order. One way in which one becomes aware of the interference and concern with difference is the placement of *Chimera* (Vári 2001) within the context of the Voortrekker Monument. The way in which Vári attempts to further disrupt order is however more relevant to the second stereotype of persecution.

4.6.2. *Chimera* as a challenge to set order

The body as breaking immersion or disrupting order is portrayed as negative in cyber-utopian writings. Through *Chimera* (2001) Vári shows that the body can disrupt order, but that this disruption is positive. Emphasis is placed in this subchapter on Vári's inclusion of the body and how the body is purposefully and positively used to challenge order.

Vári draws attention to the power of bodies in *Chimera* (2001). Vári's morphing body stands apart from the static bodies on the marble friezes (Vári: 2003:[sp]), which can be seen in Figure 2, 3, 15 and 21.The petrified body of the friezes represent history and should create a way for the spectator to relate to history, but only from a one-sided perspective steeped in ideology (Vári 2001:[sp]).Vári's body creates a new focus point for the spectators, allowing them to perhaps identify more with her than with the historical figures.

Not only is the viewers of *Chimera* (Vári 2001) confronted by images of the artist's body as well as the isolated bodies depicted on the friezes, but also the bodies of others in the space. As previously discussed[138] the projectors of the installation allows for the shadows of viewers to become part of the artworks (Williamson 2004:390). An inclusion of a shadow can be seen in Figure 20 and 22, which shows my shadow falling on a white sheet within the 2016 *Chimera* (Vári) installation. The shadows indicate the presence of other bodies, now participating in the appropriated historical narrative as told by Vári through *Chimera* (2001). Through the inclusion of shadows, each specific to the physical body to which it is connected, viewers of *Chimera* (Vári 2001) are aware of the presence of other individuals. *Chimera* (2001) does not isolate viewers, but rather provides an individual's interpretation of a collective experience.

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[138] This is also mentioned in chapter three: *Immersion and Phenomenology in Relation to Embodiment, New Media Art and The Chrysalids* (49-74), 3.4. *Phenomenology, virtual reality and immersion* as applied to *Chimer*a and *Under-scan* (56-68).

Figure 20: Minnette Vári, *Chimera.* 2016. Photograph by Author.

Vári, throughout her oeuvre aims to contest the notion of history as a set narrative, and through her own shifting body means to imply that history in itself is composed of fluid shifts (Vári & Murinik 2016:49). *Chimera* (Vári 2001) is particularly effective since it is a body that changes drastically and is monstrous in its dissonance, which is discussed in detail in the next subchapter. What is of particular relevance to this subchapter is the representation of a body, changing or no.

Chimera (Vári 2001) focuses more on the artist's body but does include the viewer's shadows to an extent, still placing emphasis on the importance of a body as a medium through which to experience her art. Vári's morphing body challenges the set order of the Voortrekker Monument and thus shows itself as favouring the body.

4.6.3. *Chimera* as carrier of victim's marks

Victim's marks are included in *Chimera* (Vári 2001) where such designations of difference would usually be excluded by cyber-utopian notions. *Chimera* (Vári 2001) is discussed in relation to Vári presenting her body as monstrous, which is usually associated with the liminal and also indicates a traditional victim's mark. I argue in what follows that the focus on bodily difference allows the body to not be marked as a scapegoat, but that this is not deemed as negative by Vári.

Chimera (2001) (Vári 2013) focuses on the body, albeit a virtual body. *Chimera* (2001) (Vári 2013) exaggerates traditional victim's marks associated with the body and instead uses it as a source of empowerment as can be seen through her morphing form depicted in Figure 2, 3, 15 and 21.

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The scapegoat can also be marked by monstrosity or physical deviance. Punday (2002:803) explains that a way to explore or comment upon society is through the body of the monster. This is mostly due to its duplicity as its conglomerate nature can refer to many things across boundaries and create relations between such things (Punday 2002:803). *Chimera* (2001) (Vári 2013) similarly uses the body of the monster, depicting a duplicitous entity which changes constantly, thus defying categorisation.[139] This may be seen as a comment on the rigorous structures of categorisation connected to the Voortrekker monument and Afrikaner Nationalist regime.

In *Chimera* (2001) (Figure 21) Vári uses the monster's nature[140] to disrupt order. This can be seen primarily through the projection of her monstrous form on to the friezes, an example of which is shown below. Firstly this set narrative is interrupted by the forced insertion of another figure (Vári & Murinik 2016:49). The narrative is not pliable in anyway, any distortion of it clashes with it since it cannot bend to accommodate any change. Secondly the narrative is interrupted and challenged by the fact that the body is completely Other to the bodies of those depicted in the friezes (Vári& Murinik 2016:49).[141]

Figure 21: Minnette Vári, *Chimera* (Black Edition). 2001. Digital media, Variable. (Ziegler Galerie [sa]:[sp]).

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[139] Vári as interviewed by Murinik (2016:49) states that her reason for choosing *Chimera* as a title is because it specifically refers to the well-known conglomerate monster of Greek mythology. Her interest in it is also related to the power of the creature and its ability to seduce and destroy its victims (Vári & Murinik 2016:49).

[140] Traditionally monsters become scapegoats due to their nature to defy boundaries, which also ties them to the abject (Steimeist 2009:403), as well as their marked otherness (Betterton 2006:80). Monsters present social disorder through their bodies and are easily scapegoated (Douard 2009:32).

[141] The friezes in the Hall of Heroes present a set narrative. This narrative is so rigid and unchanging that it is literally set in stone. Firstly, this narrative is interrupted by the forced intrusion of another figure. The narrative is not pliable in any way, and therefore any distortion of that narrative clashes with it, since it cannot bend to accommodate any change. Secondly, the narrative is interrupted and challenged by the fact that the body is completely 'other' to the bodies of those depicted in the friezes.

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The Voortrekker monument, as well as its historical and socio-cultural associations, concerns the exclusion of various other narratives surrounding the same events (Meents 2009:9). Vári's monstrous composite body is thus a depiction of many people as well as their versions of the same history in one being. Vári's body represents the marginalised, that is women, black male warriors, a black female, but also some Voortrekker fragments (Stutzer 2008:24). Some of these transformations are visible in Figure 2, 3, 15 and 21. *Chimera* (Vári 2001) aims to present a fuller view of the historical narrative through the construction of a new narrative that is a conglomeration of interpretations (Vári 1999:[sp]). This joining together also represents a contamination as individuals from various race categories become unified in a single body. This further adds to the notion of the scapegoat and monster as abject since what is represented is not solely from one category and crosses the boundaries of many categories.

There is meant to be a sacred aspect to the friezes. This notion of the sacred is transformed into something abject through Vári's body (Stutzer 2008:24). The bodies in the friezes themselves are challenged by *Chimera* (Vári 2001). According to Creed (2013 [1995]:137) the proper body is a stable body as opposed to an abject body that is in flux. The proper body as well as the ideas coupled with the proper body-image is disturbed by *Chimera* (Vári 2001) (Vári & Murinik 2016:50).[142] Everything outside of the figures in the friezes comes to represent an abject body.

All other bodies, such as those of the spectators, are changing and moving closer to becoming corpses, thus more akin to Vári's body than the static bodies in the friezes. *Chimera* (Vári 2001) points out that according to the narrative displayed on the friezes, anyone that differentiates from this narrative could be marked as a victim and thus scapegoat.

Such a position is not without power, however (Aguiler 2015:[sp]). This is also due to the numbers of those now feeling more sympathy towards the monster and what it represents. The scapegoat is usually someone/thing with no one to avenge it. Through Vári's portrayal, the element of isolation, of the scapegoat from the rest of the community, which makes of it an easy target, is removed.

In order to further her commentary, Vári, through *Chimera* (2001), uses aspects of individuals that would have defined them as other and also would have been understood as victim's marks. These victim's marks include the female body as well as anybody that is not an Afrikaner (Vári& Murinik 2016:50) (Figure 2, 3, 15 & 21). Such marks, which led to being excluded from the friezes or being misportrayed in the narrative, Vári reinserts. These reinserted victim's marks no longer define

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[142] Vári in an interview with Murinik (2016:50) also notes that her body is at odds with the dominantly male perspectives and images in the monument. This is also something that is emphasized by Vári in Murinik's interview (2016:50)'s deliberately sexualized images of herself, which is as she herself states : '...really showing my genitals to this patriarchy'.

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victimhood, but through Vári's portrayal become empowered and thus symbols of fluidity (Stutzer 2008:26).[143] An example of Vári's body bearing victim's marks can be seen below.

Figure 22: Minnette Vári, *Chimera.* 2016. Photograph by Author.

The physical body, here Vári's, is a symbol of change even without the elements of the monstrous. It is also this element of change which contests the friezes in a subtle way before one considers the direct challenged offered by the chimera in *Chimera* (Vári 2001). The human body, and particularly the female body, is connected to change through puberty, childbirth and aging (Young 2005:49). The depiction of a body that is moving and changing thus challenges the unmoving, seemingly immortal, bodies of the friezes. The above figure particularly shows female subjects, including Vári herself.

Chimera (Vári 2001) presents the traditional mark of the victim which is associated with the monstrous not as a weakness or locus of stigma, but rather as a powerful agent indicating positive change. *Chimera* (Vári 2001) uses the boundary defying monster to destabilize the uniformity of the

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[143] The physical body, here Vári's, is a symbol of change even without the elements of the monstrous. It is also this element of change which contests the friezes in a subtle way before one considers the direct challenged offered by the chimera in *Chimera* (Vári 2001). The human body, and particularly the female body, is connected to change through puberty, childbirth and aging (Young 2005:49). The depiction of a body that is moving and changing thus challenges the unmoving, seemingly immortal, bodies of the friezes.

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narrative of the Voortrekker monument. This is also achieved through connecting the monstrous body with the abject, which indicates that which the Friezes excludes.

4.6.4. *Chimera* and sacrifice

Chimera (Vári 2001) is phenomenological in nature and thus focuses on the body rather than aiming to exclude it. This subchapter concerns *Chimera* (Vári 2001) as not placing the body in the position of a scapegoat. What is instead touched upon is how *Chimera* (Vári 2001) rather extends the body. *Chimera* (Vári 2001) also includes the image of a body, even if it is only a filmed body.

Vári, though her use of media and her own virtual body extends her viewer's bodies. The body-image and body-schema that is presented to the viewer is wholly other than their own, yet to understand the events of *Chimera* (Vári 2001) their own bodies must accept the image of Vári's body as a tool for making meaning.

Although *Chimera* (Vári 2001) contains this image of a body, it is still only a recording of a body, no matter how altered by morphing techniques, which can be seen in Figure 22. A "film body" as described by Buchanan (2009:270), is merely a trace memory of the original individual. In this way the body is an absence, as it (re)presents the absence of the particular individual. Even if the film body represents an absence it is still intimately linked to the formally remembered body in its actions and composition (Buchanan 2009:270). Through her morphing techniques, Vári plays with the connection between her filmed body, memory of her body, and real body, creating distance between these notions of the body.

The absence of her real body may relate to the absence of any real bodies in the friezes. Her morphing image is as far removed from her real body as the idealised figures in the friezes are removed from the individuals they are intended to show. Through *Chimera* (2001), Vári points out the inconsistency of memory by effectively inserting a memory of her body into a historical construction of memory. The absent bodies associated with the history depicted in the friezes are confronted with the presence of a filmed body that is, like the friezes themselves, also an absent body

A further use of absence and the body as threatening order is the inclusion of viewers' shadows in *Chimera* (Vári 2001). The viewers cannot interact with the friezes, nor can they interact or change the memory of Vári's body or actions directly (Vári 2001:[sp]). They can, however, interfere with the viewing as their shadows fall on the friezes, blocking out both the Afrikaner nationalist narrative as well Vári's appropriation of the narratives (Williamson 2004:390) (Figure 20 & 22). Just as Vári uses her filmed body to interact with the friezes, so too the viewers in a sense do what Vári does. They interact with the narrative through their shadows, which is an absence much like Vári's filmed body. However, their shadows also directly imply a real body that is able to interpret and change the

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narratives presented. They can be like Vári through their embodiment, challenging the established order presented by the Voortrekker monument.

Although Vári's body takes on fantastical shapes, the realness of that body is contrasted with the static bodies of the sculpted figures (Kellner 2001:[sp]). Her inserted, filmed body is meant to cultivate a rapport with the audience, allowing them to rather identify with her body. The amount of differing bodily shapes Vári occupies allows the viewers not only to identify with that which is similar to them, but also that which differs from their own bodies. Although Vári presents work that is not as interactive as that of Lozano-Hemmer (*Under Scan* 2005-2008), the body is brought into focus as opposed to removing it from the process of making meaning.

4.7. Conclusion

It can hereby be concluded that all four the stereotypes of persecution is evident in the myth of cyber-utopia, which informs how *Wave UFO* (Mori 1999-2005) (Figure 1, 6-9, 14 & 16-18) treats the body, as well as *The Chrysalids* (Wyndham 1955) where in Sophie is viewed as a sacrifice.

Under the first stereotype of persecution which causes a mimetic crises is considered as desired by cyber-utopia. This has as consequence *Wave UFO* (Mori 1999-2005) focusing on participants' similarities and not differences. Within *The Chrysalids* (Wyndham1955) the first stereotype of persecution is evident in that mutation occurs under all circumstances, not differentiating the community members. The community members thus also do not differentiate between mutants of a physical nature and those of a telepathic nature.

The notion of a crime which threatens order is seen in cyber-utopian writings as related to the body which it deems a prison of the mind. *Wave UFO* (Mori1999-2005) thus tries to sustain immersion for longer through a brain-interface. *The Chrysalids* (Wyndham1955) uses the idea of crime mostly through associating mutants as being incarnated blasphemes which challenge the set order. Sophie is also viewed as challenging the order of the mutant community in the Fringes.

Victim's marks are clearly pointed out by the cyber-utopian myth. Through aiming to avoid bodily victim's marks these are thus pointed out as that which marks victim, focusing on the body as the carrier of such marks. *Wave UFO* (Mori 1999-2005) is designed with the impetus of hiding the body as well as using socks to keep the UFO clear of abject material with which the body is associated in cyber-utopian writings. Mutants and Sophie in particular are portrayed as being abject and easily identified by their physical victim's marks.

The fourth stereotype of persecution can also be argued as being present since the cyber-utopian myth indicates that the body should be abandoned. *Wave UFO* (Mori 1999-2005) can be viewed as leaving the body as passive as possible (Figures 7 & 14), aiming to exclude it as much as possible from the

meaning making that happens in the artwork. The viewers are also not provided with as much as an image of a digital body to remind them of their own bodies. Sacrifice is also evident in *The Chrysalids* (Wyndham 1955) as firstly mutants, including Sophie are exiled to the Fringes, and secondly as Sophie is killed so that the telepathic characters can enter a utopian city.

In contrast to this, new media art which can be considered more phenomenological, does ultimately not place the body as a sacrifice. *Under Scan* (Lozano-Hemmer 2005-2008) (Figure 4, 10-12 & 19) and *Chimera* (Vári 2001) (Figure 2, 3, 15 & 20-22) both take the body as central starting point, either physically or through the inclusion of a digital image of the body. *Under Scan* (Lozano-Hemmer 2005-2008) can be seen as including the body of the participants as well as the digital bodies in his video portraits. *Under Scan* (Lozano-Hemmer 2005-2008) also extends the body and in this way places more emphasis on the body. Vári's *Chimera* (2001) can be interpreted as similarly emphasising the body as her work presents the viewer with a digital body (Figure 2, 3, 15 & 20-22) through which they are reminded of their own bodies. *Chimera* (Vári 2001) presents the body as a set challenge to order and uses victim's marks as tools to destabilise order.

This chapter concludes that cyber-utopianism includes the four stereotypes of persecution as it views the body and mind as separate, whilst phenomenological approaches to virtual reality and augmented reality rather favour the body and thus circumvent the four stereotypes of persecution. *Wave UFO* (Mori 1999-2005) aims to leave the body passive through its brain interface and does not refer to the body through including a digital body (Figure 14). *The Chrysalids* (Wyndham1955) contains sacrifice as the physically deformed mutants, particularly Sophie, are first exiled and finally killed so that the telepaths may escape to a utopian type city. *Under Scan* (Lozano-Hemmer 2005-2008) and *Chimera* (Vári 2001) presents a contrast to this as these works demonstrate that the body cannot be excluded and instead focuses on it through interactivity and digital images of the body.

CHAPTER FIVE: CONCLUSION

5.1. Summary of chapters

The myth of a cyber-utopia is highly appealing in the contemporary information society. Although the myth of discarding the body so that the mind can be immersed in cyberspace dates primarily from the 80s and 90s, it is accompanied by several ideas that are still problematic in contemporary times. The digital utopia is, as all utopias are, a fictional space. The myth accompanying it being thus also involved with probabilities and speculations that are idealised and removed from reality. Through indorsing a dualistic view of embodiment and giving the mind a superior position, this myth however sets the body up as a sacrificial victim in the face of obtaining utopia.

This study was commenced by providing definitions of the relevant terms as well as overviews of the selected theories, artists and *The Chrysalids* (Wyndham 1955). The cyber-utopian myth and how it is related to virtual reality, cyberspace, immersion and artworks that make use of these technologies was explored the chapter two. Within this chapter it was shown that *Wave UFO* (Mori 1999-2005) (Figure 1, 6-9, 14 & 16-18), which makes use of virtual reality and immersion, is utopian in nature and aims to exclude the body. Similarly *The Chrysalids* (Wyndham 1955) was discussed in relation to Cartesian dualism and it was found that the telepathic characters represent the mind and mutated characters like Sophie represent the body. A hierarchy also exists between these characters with the telepaths being superior and obtaining utopia.

Cartesian dualism is however not the only view of embodiment that is present when a human interacts with the virtual. Chapter three focused on phenomenology, mainly drawing on the writings of Merleau-Ponty. Merleau-Ponty's critique of Cartesian dualism was discussed and it was found that the body cannot be excluded from the meaning making process. To illustrated this the artworks of Minnette Vári's *Chimera* (2001) (Figure 2, 3, 15 & 20-22) and Lozano-Hemmer's *Under Scan* (Lozano-Hemmer 2005-2008) (Figure 4, 10-12 & 19) were discussed in relation to their wilful inclusion and dependence on the body. *The Chrysalids* (Wyndham 1955) was also reinterpreted from a phenomenological perspective, the focus being on the notion that subjective experiences, even of the telepathic characters, are generated in the world through the body.

After having discussed both Cartesian dualism and phenomenology as they apply to immersion and cyber-utopianism, chapter four focuses on sacrifice as suggested by the cyber-utopian myth. Sacrifice was defined and explained according to the four stereotypes of persecution provided by René Girard. It was found that the body is associated with sacrifice in *Wave UFO* (Mori 1999-2005), which is more utopian and concerned with Cartesian dualism. The body here is associated with a loss of difference, accused of a crime or of disrupting order, identified by its victim's marks and is meant to be excluded by artworks like *Wave UFO* (Mori 1999-2005). In contrast to this Minnette Vári's *Chimera* (2001)

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and Lozano-Hemmer's *Under Scan* (Lozano-Hemmer 2005-2008) were shown as subverting these stereotypes of persecution through their focus and the inclusion of the body. *The Chrysalids* (Wyndham 1955)'s depiction of Sophie was found to contain the four stereotypes of persecution, ending in the violent death of Sophie. This can also be drawn back to the predominantly dualistic notions of embodiment within the novel.

The presented exhibition catalogue, which is to be read in conjunction with this thesis, considers Sophie's sacrifice in relation to my own body of work, *The Body of Sophie* (Le Roux 2015-2016). Here it was discussed how my body of work aims to portray Sophie as a subject through taking into consideration her subjective experiences of the world, which centre on washing as well as her death.

5.2. Conclusion of study

This study has mainly focused on Cartesian-dualism as the underpinning of the cyber-utopian myth as well as how this opens the body up to being sacrificed as per the four stereotypes described by René Girard. An alternative interpretation of embodied interaction with the virtual was also considered. Drawing from the phenomenology of Merleau-Ponty it was argued that the sacrifice of the body is an impossibility, but that the myth of a cyber-utopia still stipulates the abandoning of the body. The notion of the cyber-utopian myth presenting sacrifice and phenomenology circumventing this was explored through the new media artworks; *Under Scan* (Lozano-Hemmer 2005-2008) (Figure 4, 10-12 & 19), *Chimera* (Vári 2001) (Figure 2, 3, 15 & 20-22) and *Wave UFO* (Mori 1999-2005) (Figure 1, 6-9, 14 & 16-18). Finally my own practical work's interpretation of the relevant issues was also discussed.

Cartesian dualism was discussed as per the theories of René Descartes, particularly in how it pertains to immersion and the myth of a cyber-utopia. It was found that through splitting the mind and body, Cartesian dualism places the mind as superior to the body. Cyber-utopia's utilisation of this concept can however be understood as reinforcing this split, but with the expectation that the body will ultimately fall away completely.

Cyber-utopia's use of ideas that are heavily influenced by the Cartesian split thus aim to devalue the body and reduce it to an object. The body is pushed to the margin of what constitutes the self, making it easier to give up. Cyber-utopian writing describes the body as being simply meat to which the true self is unfortunately attached.

The notion of the body as useless was also discussed in relation to *Wave UFO* (Mori 1999-2005) and *The Chrysalids* (Wyndham 1955) since both these texts are concerned with utopia in some way and has placed the body as inferior to the mind. In *Wave UFO* (Mori 1999-2005) this was noted as being present in the focus of the project on brain waves and not the rest of the body, which is left passive

(Figure 14). The focus within this artwork is the oneness that is created by the utopian like digital vision provided by the participants' brainwaves. It was noted that as much as possible of the physical body is hidden as well as left passive

*Th*e *Chrysalids* (Wyndham 1955) was discussed as presenting the reader with characters who represent the mind and body separately, indicating the Cartesian-split. The telepaths have their own mind space and even escapes to utopia whilst mutated, body-centred characters like Sophie, are killed off. It was concluded that he mutants, like Sophie are seen in the book as being objects rather than subjects, which associates them with the body.

With the body viewed as an object by the cyber-utopian myth, this allows for the body to be sacrificed. A loss of difference is apparent as utopian projects aim for uniformity. It was found that virtual reality and cyber space aims to be a place where all are one and no differences can cause conflict. This view is also echoed in *Wave UFO* (Mori 1999-2005) where participants are encouraged to focus on the lack of difference between them through their correlating brainwaves.

*Th*e *Chrysalids* (Wyndham 1955) was also discussed as containing a lack of difference, but not in the way in which it is related to utopian thinking. Here the loss of difference throughout Waknuk is considered to be the various mutations as well as the telepaths not being differentiated from normal mutants.

Since the body is considered a prison for the flesh it was also discussed how the body is positioned as a scapegoat through an accusation concerning the threat it poses to order. Cyber-utopianism describes the body as that which breaks immersion and robs the participant of the cyber-utopia. This notion was considered in relation to *Wave UFO* (Mori 1999-2005) since this artwork focuses on overcoming the body. *Th*e *Chrysalids* (Wyndham 1955) similarly incriminates body-centred characters by setting them up as responsible for God's wrath and even depicting Sophie as killing a mutant, aiming to add to her designation as a being from a lower order.

Cyber-utopian writings stipulate the body's victim's marks and claims that through excluding these marks it can create a space free of strife. This however further pushes the body to the margin where it was discussed as becoming associated with the abject and even the monstrous. *Wave UFO* (Mori 1999-2005) considers the body as filthy; a fact that is emphasised by the handing out of socks (Figure 17). *Th*e *Chrysalids* (Wyndham 1955) in turn describes the mutants as deformed, thus associated with the monstrous, but also, as in the case of Sophie, as being filthy and abject.

As the final consideration of the body as sacrifice in the face of a cyber-utopia it was discussed that cyber-utopia aims to cast the body off, indicating that the body is either killed or permanently left

passive. This was discussed as being present in *Wave UFO* (Mori 1999-2005)'s aim to render the body inactive as well as *The Chrysalids* (Wyndham 1955)'s unemotional killing off of Sophie.

If the body is considered an object, then it is vulnerable, but it was then discussed that phenomenology re-inscribes the body as being valuable, as well as being a subject, thus circumventing the sacrifice described in cyber-utopianism. Drawing mainly from Merleau-Ponty I discussed the body as being inseparable from the mind and intimately tied to the life world were in it finds itself. It became apparent that the body could not be excluded from the virtual through immersion, but rather facilitates immersion. McLuhan's theory of the body being extended by media was also considered, concluding in the notion that the body uses the medium of virtual reality to extend and influence the body-schema.

 It was concluded that since artworks like *Under Scan* (Lozano-Hemmer 2005-2008) and *Chimera* (Vári 2001) focus on the body, acknowledging it as a subject, they subvert the sacrifice of the body. The lack of difference is subverted in that *Under Scan* (Lozano-Hemmer 2005-2008) draws attention to the lack of difference created by surveillance equipment and focuses on individuals instead. Lack of difference is similarly pointed out by *Chimera* (Vári 2001) as it seeks to destabilize the utopian narratives of the Voortrekker Monument.

The second stereotype is subverted since the body is not cast in the role of disrupting immersion or an, obstacle, but rather a necessity in interacting and understanding the abovementioned works. Through both Lozano-Hemmer and Vári's use of bodies, the body as having agency and as performer is taken into account.

Victim's marks are purposefully included by *Under Scan* (Lozano-Hemmer 2005-2008) (Figure 11) and *Chimera* (Vári 2001) (Figure 2, 3, 15 & 21). Difference and aspects that could be identified as victim's marks are embraced in *Under Scan* (Lozano-Hemmer 2005-2008) as the artwork includes various video portraits and focuses on individual body types through tracing their shadows. *Chimera* (Vári 2001) embraces victim's marks to such an extent that the marks are associated with the monstrous, but also with empowerment through the physicality of the body.

With the body as focus point, *Under Scan* (Lozano-Hemmer 2005-2008) and *Chimera* (Vári 2001) thus point out the impossibility of circumventing or excluding the body. *Under Scan* (Lozano-Hemmer 2005-2008) is dependent on the digital bodies of the video portraits but also the physical bodies of the participants (Figure 4, 10, 12 & 19), without these bodies the digital aspect of the work would be inaccessible. The body, through the media involved can also be understood as instead extended. *Chimera* (Vári 2001) also emphasises and extends the bodies of her viewers through presenting them with a digital body that points back to their own physical embodiment (Figure 2, 3, 15 & 20-22).

New media artworks that take approach the body as a subject rather than an object, points out the problematic nature of aiming to sacrifice the body. *The Body of Sophie* (Le Roux 2015-2016), as discussed in the exhibition catalogue, which are all stop-motion animation videos, is chiefly concerned with embodiment, immersion and sacrifice. *The Body of Sophie* (Le Roux 2015-2016) means to point out that Cartesian dualism is that which aims to facilitate the sacrifice of the body, which is likened to Sophie in my art, for cyber-utopianism. Sacrifice is exemplified by Sophie, originating from my conception of Sophie from *The Chrysalids* (Wyndham 1955) is sacrificed in each video. This is meant to show that from a phenomenological perspective it can be acknowledged that the exclusion of the body is desired, but that it is highly problematic.

Throughout the continuation of this study the notions of embodiment have become more tangible to me. Phenomenology is a theoretical practice concerning embodiment that now informs my view of the world and through the labour intensive process of stop-motion animation I was constantly reminded of the importance of my body. The notion of the body as expendable or as only meat has become through my research a notion that is as mythic as the cyber-utopia itself. It is my conclusion that the myth of the cyber-utopia makes itself unattainable in that it asks for the sacrifice of something that can never be removed from the self since it is an intimate part of that self.

6.3. Suggestions for future research

This study has mainly focused on sacrifice in relation to embodiment in the cyber-utopian myth that originated in the 80s and 90s; this version of the cyber-utopian myth is however dated. In further research attention might be allocated to the more recent resurgence of virtual reality, particularly head mounted displays like the *Oculus Rift* and its competitors which include *PlayStation VR*, which are described in detail by Ripton and Prasuethsut (2015:[sp]). It could be of interest in further academic studies to identify if the new technologies associated with immersion has also posited the body as a burden.

The promises surrounding new virtual reality head mounted displays seem utopian in nature, such as the notion that this device can provide an immersion that is almost complete, a device Schram (2015:7) described as that which "can transform cyberspace into something truly inhabitable". This optimism is however tainted by elements concerning bodily wellbeing.

The immersive quality of head mounted displays like the *Oculus Rift* have been found to be so immersive that fear has been expressed my Denny Ungar, head of *Cloudhead Games*, for people with heart conditions (Griffiths 2014:[sp]). This notion primarily stemmed from Ungar's exertion that being scared to death by virtual reality was close at hand (Griffiths 2014:[sp]). When one considers Ungar's statement however, it may be interpreted that his concern only makes virtual reality more

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desirable, that the body being scared to death is a testament to the highly immersive nature of the technology.

An artist that touches upon the intertwining of virtual reality and fear is the Canadian artist Jon Rafman. This artist used head mounted displays, the *Oculus Rift* in particular, to create a virtual world where in the participants of this exhibition at the Zabludowicz Collection in London, 2015, were confronted with monsters and other frightening elements (Jones 2015:[sp]). Rafman's work may be interpreted as having more to say about virtual reality than catering to geek culture (Jones 2015:[sp]) concerning horror video games.

Rafman's horror inspired work may be taken together with Ungar's expression on being scared to death and considered in terms of what this indicates about the new notions of virtual reality and how this relates to cyber-utopianism and the body. The notion that to desire to be scared to death by the virtual exits can be interpreted as again devaluing the body. It could prove to be of interest to apply Girard's stereotypes of persecution to the way in which Rafman deals with the body in his art, which is accommodated in some of his installation and video pieces (Frankel 2016:[sp]).

Theorists whose work might provide an interesting insight into the concepts mentioned above in include Julia Kristeva, specifically concerning the notion of horror and the body as it is concerned with the abject, Jean Baudrillard's notions on the simulacrum and the desire of symbolic exchange concerning virtual reality as well as writings of Girard on sacrifice, but also on mimetic desire. This study has touched upon Kristeva's notion of the abject, but only insofar as it emphasises the body and is connected to the monstrous and the liminal, its strong relationship with horror could be explored in more depth. Similarly Girard's theories, particularly the four stereotypes of persecution were used in this study. It could be of value to explore the mimetic desire which leads to violence and sacrifice as it relates to the virtual, in particular to the desire for a new cyber-utopia,

Girard's theories of mimetic desire and sacrifice stem from the author's fascination and careful reading of various myths from various time periods inhuman history. It stands to reason that myths of our contemporary age are open to some of the observations made by Girard. This is particularly true of utopian narratives that have attached themselves in turn to spiritual and metaphysical concerns as well as contemporary technologies. As long as narrative and myth continued to be generated the analysis thereof allows one to reflect critically on the values and ideologies of the socio-historical context that produced them.

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