Altered Bodies, Changing Identities, Shifting Power: Trans/Posthumanism and the Reproduction of Humanity in Film and Video Game Fandom

Thesis submitted for the Degree of
Doctor of Philosophy
at the University of Leicester

by

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2019

The universe is cold. Fun is the fire that melts the blocks of hardship and creates a bubbling celebration of life. It is the birth right of every creature, a right no less sacred for having been trampled on since the beginning of time'

Nick Bostrom

Abstract

This thesis investigates the theories of transhumanism and posthumanism, the former dealing with radically changing bodies and minds, and the latter with the nature of humanity itself. It examines how these theories are rapidly growing and gaining more exposure in both today's media (specifically, video games and science fiction (SF) screen media, two likely platforms for such work), and the minds of their fans: the so called 'geek fandom' that follows this type of media with a passion. The literature review lays the groundwork for this research, following the early days of humanist thought, the birth of 'anthropocentrism', and the history of transhuman and posthumanist thought from ancient times through to the modern day. In addition, this thesis tracks the ways in which video games and science fiction scholarship has developed, alongside research methods for both, in order to provide context to the case studies I have created: two for video games, (Xenoblade Chronicles/Xenoblade Chronicles X) and one for SF screen (EX_MACHINA). Empirically, this thesis is triangulated with developer interviews and comments, together with the fan culture study, which provides the base for the primary research. This includes interviews with 'lay' fans and experts in various fields alike, which allowed for a great sample diversity. In fact, it is from the latter that the three key themes for this work emerge: 'body', 'identity' and 'power'. These themes allow for a unique theoretical framing of trans/posthuman ideology, analysing the depth of popularised themes. Ultimately, with SF as a powerful disseminator of themes and video games as an interactive, responsive medium, these two media types and the fandom surrounding them make an excellent case for the rapid growth of trans/posthuman ideas. Ultimately, this thesis provides a rich triangulated analysis on a constantly shifting and changing scholarship on the current state of popular culture, and especially that of fandom.

Acknowledgements

I want to thank my supervisors, Dr. Athina Karatzogianni and Dr. Anna Claydon, for their support and advice during my time here at Leicester, making sure my studies were guided in the right direction, and providing me with opportunities to hone my skills.

I wish to thank my mother and late family members, who supported my selfish desires and made all of this possible by allowing me to pursue a life at university, which changed me forever.

And also, I wish to thank the various video game producers and film directors who have inspired me to take up this line of work, with special regard to Nintendo, who have provided countless irreplaceable hours of fun and entertainment.

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Introduction

The nature of humanity has ever been a changing one, redefining and reimagining itself over the centuries. As such, I have taken a particular interest in one facet of the various incarnations of 'humanism' that deals with the more extreme changes that the modern world can bring about – that of 'transhumanism, which means to alter and improve the body (with technology and science), and its (sometimes) logical endpoint, 'posthumanism' (where humanity is distinct from its current incarnation). The two are sometimes used interchangeably by scholars, and the two often interact, but are distinct as being an 'ongoing process' (even 'posthuman' people can continue to change). Said philosophies deal with both the real and the fantastic, from the mechanical mixture of the cyborg to the abstract apotheosis of ideas like 'transcendence', which consider the furthest reaches of human imagination, as seen in works such as science fiction. Indeed, sci-fi works, both in the form of screen media (film, television, etc.) and video games will form the centre around which these ideas will be discussed and analysed.

That said, this work must have a space to fill in this vast field of research, and the academic world is no stranger to the fields of transhumanism or posthuman theory, with prolific scholars and philosophers such as Nick Bostrom (2003), Max More (2013), and others focusing heavily on it. Many others followed suit, whose works will also be discussed as the thesis progresses. As such, where does this thesis sit in such a populated field? The answer to that can be found in the particular angle this work uses, using a particular set of case studies to enter an area relatively untouched by previous works — and that would be exploring transhumanism and posthumanism not only through the lens of the media discussed above, but also through their fans.

Indeed, prior research has looked at all of these angles separately, but very rarely are they intertwined. For instance, as will be discussed in the literature review below, scholars have absolutely looked at the existence of trans and posthuman themes in sci-fi screen media (Campbell and Saren, 2010; Geraci, 2011; Hyeck, 2011, et al), in video game media (Cross, 2013; O'Gorman, 2015, et al), not to mention game technology itself being used as a transhuman tool (Baranowski and Buday, 2008, et al).

Furthermore, studies into 'fandom' and how they interact with each other and their media works have naturally also been done before (Cristofari and Guitton, 2016; Dunlap and Wolf, 2010, et al), but this thesis seeks to accomplish something new, to bring all of these together to study the effects and impact that these philosophies have on their respective media texts, and on the implications of how people think of these ideas as a whole.

My own research and personal life have been leading up to this point as well, as they have informed my own beliefs and passion for video games and game-based learning. Firstly, I've been an avid fan of not only science fiction works (which extends to the non-game theory and examples in this work), but also, of course, of video games. As long as I can remember, I've had a games console or handheld system in my hands, having played systems across all platforms, be they Nintendo, Sony, or even Microsoft (in the form of PC gaming). So not only do I have a breadth of knowledge of how games work from a player's standpoint, I have many friends who are computer scientists and even game developers in their own right, who have shared much of their knowledge with me as well – though of course, I can't understand all of the technical specifics.

That said, when I went to the University of Hull to study media in 2011, I didn't have a particular goal in mind, but soon gravitated towards modules where my interests were most applicable – ultimately, this came to a head with the dissertation in third year, which in a sense served as a precursor to this work, as it too dealt with ideas of video games, but more in the sense of whether they had more merit as a gameplay (ludology) tool, or as a storytelling (narratology) one – these terms will make themselves known later in this work, linking back to the past in a practical way.

Finally, in my Masters year, I undertook a year in English Literature – though this might at first seem irrelevant to this work, it was in the thesis for that degree that I first found an interest in science fiction literature and the idea of transhumanism/posthumanism – through looking at the work of classic authors such as H.G. Wells and scores of pulp magazines from decades past, I garnered an interest in the ideas of changing the body, and what this would do to people as well as society, so when I was invited to undertake a PhD at Leicester, I had a clear idea what I wanted to do, combining all I had learnt beforehand.

As such, what this research seeks to evaluate is the impact which this philosophy has had on the development of not only other scientific research, but also on the media and the public consciousness. Visual media, video games and the fans that surround them are valuable informants and sources of information as to what the attitudes are on this changing world we inhabit – the vast new technologies and abilities that are quickly becoming available to us that, a century ago, likely could not have been dreamed up. As such, there is fear surrounding transhuman and posthuman theory; of the dangers that humans could cause by tampering with genetics, as well as the very real potential of an AI rebellion should they become advanced enough, as depicted in films and verified by AI researchers, amongst others. As such, it stands as one of the major moral panics of this era when it comes to scientific progress, despite the benefits that some would stand to gain. Thus, the research question and aims are;

Research Question – How has the media transmitted and reproduced transhuman and posthuman ideas, and how removed are they from our current ideas of humanity?

Main Research Aim – To investigate the interactions transhumanism with the themes of the body, identity, and power/agency when applied through different forms of media to their fans, via semiotics and themes of change; including body alteration, gender, race, and more – ultimately concluding that the element of 'humanity' cannot be removed, and that despite physical change, humanism and anthropocentrism will be constantly reproduced.

Secondary Research Aim – To explore the growth of transhuman/posthuman ideas and themes throughout fictional media, with emphasis on film/TV and video games – the former being a more powerful disseminator of themes, while the latter focuses more on interaction and creation.

Based on the methodologies I describe later, a 'twofold' strategy has been used to construct the methodology for this work; firstly, a series of case studies of different media forms which clearly illustrates the difference in transhuman representation

between passive and interactive forms through their agency and internal themes. The second form comes in the shape of combined ethnography and interviews, which allow interaction with fans and experts alike to discover how far these ideas have become integrated into society, while maintaining the classic facets of humanity. The interpretive framework used for these methodologies is a critical view of transhumanism that acknowledges the popular and progressive ideas that transhumanism embodies, while remaining distanced from wholly accepting it as gospel due to its history of being entrenched in the hands of the rich and powerful, which will work its way into the case studies and interviews alike.

The way I have contextualised this thesis stems from the multitude of texts I have explored, from sources from all through the previous and current century, both in my academic literature and my case studies alike, including those mentioned by my respondents in the interview-based sections for each of the chapters. That said, for my major three case studies, the video games *Xenoblade Chronicles* (2011), *Xenoblade Chronicles* X (2015) and the film *EX_MACHINA* (2015), these were specifically chosen as the most connected thematically and the most recent or relevant (at the time this thesis began production in 2015). That said, works have been released since which continue this line, fittingly including *Xenoblade Chronicles* 2 (2017), a sequel to the original *Xenoblade Chronicles*, and *Annihilation* (2018), another film by *EX_MACHINA*'s creator, Alex Garland, which also portray similar themes to those explored by this thesis.

Indeed, the theoretical background which informs this will become evident in **Chapter** 1, which serves as the literature review for this thesis; and goes over an extensive history of exactly how 'humanism' came to develop and change, eventually leading to 'transhumanism' and 'posthumanism' appearing. This begins with what are commonly known as the 'Classical' humanisms, starting with 'liberal humanism', also known as 'renaissance humanism' (Kristeller, 1978; Campbell, 1998; et al). After exploring how this movement, born in the 14th Century, reformed education and began a movement towards secularism in the western world, I proceed towards exploring 'secular' or 'social' humanism (Melichar, 1983; Toumey, 1993; et al). This section discusses the spread of an even more secular variant focusing on what were perceived as 'liberal

values' in the United States such as gay rights, sex education and birth control, but were restricted by conservative Christians in power, leading to the term 'secular humanist' being synonymous with 'communism' and 'evil', amongst other things.

Following this, I move on to more modern interpretations of 'humanism' and 'humanity'. This section focuses on what is termed commonly as the 'anthropocene', the age of humanity and their effect on nature itself, and the concept of 'anthropocentrism', which describes humanity's obsession with placing itself at the centre of the entire universe (Parikka, 2017; Gottlieb, 2018, et al). Here, we start to see the imbalances in power that this creates from the outset, with discussions of humans having dominion over all of nature and technology, and that humanist thought has led to the rich and powerful growing ever stronger (Gottlieb, 2018). Furthermore, we see that even when discussing the ideas of the 'posthuman', of something beyond humanity, the 'human' is something that will always be visible (Page and King, 2017), with humanity having become 'nostalgic for itself' (Schönfeller, 2017). Indeed, Badley reinforces this through explicitly comparing transhuman thought to forgetting that at our base, 'we are *also* creatures' (Badley, 2018, 421), and we are built from our collective stories about ourselves, and our shared history – it defines who we are and how we see ourselves.

This neatly transitions into my next section, on the history and definitions of the terms 'transhuman' (to change and alter humanity and humanoid objects physically), and 'posthuman' (what remains after the most extreme changes, when humanity is redefined). Here, I introduce the work of Nick Bostrom (2003; et al), who discusses the history of humanity's desire to change itself, from historic fables of humans and gods to the more modern science-fiction tales. I supplant this with work from other authors on the subject (Hughes, 2010; Ferrando, 2013; et al), who discuss the reasons why people sought this out, from immortality to the more controversial practices, such as eugenics. Foster (2019) delves into the possibility that this may happen again if left unchecked, through there being an 'implicit' re-emergence of a 'human ideal' when trying to use genetic modification and therapy to remove illness and 'weakness' (ibid, 44) – which may instead bring about a harmful transhuman future – one where pandemics could become widespread, due to a lack of genetic diversity (ibid).

Continuing into 20th Century thought, I discuss some of the subsets of trans/posthuman theory, such as Haraway's (1987; et al) socialist and feminist bend on the popular 'cyborg' idea, fusing man (or woman) and machine to create something entirely new, as well as the 'bioconservatives' that emerged to counteract these radical new theories. Finally, I discuss the recent theory of 'new materialism' (Bryant, 2011; Alaimo, 2012; et al), which toys with the idea of agency and non-living objects, and how no material can ever be truly 'inert', discussing cutting-edge technology from drones to virtual pop idols.

With the base theories out of the way, the next literature sections focus primarily on the media forms I have chosen for this work, starting with literature surrounding video games and their study (Berger, 2002, Apperley, 2006; et al). Said section details their history, their styles of use, the different types of video games that can appear, and even different ways in which they can be used and applied practically (Kinder, 1993; Baranowski and Buday, 2008; et al) – the latter of which is particularly important when discussing the hybrid trans/posthuman and video game literature (Geraci, 2012a; et al). This section also includes discussions on gender and video games, which is also remarkable fluid and taps into the 'transhuman' fantasy perfectly. After having discussed video games, the next logical step would be to discuss my next main media source, that of science-fiction (screen) media, discussing fan-favourite films such as Star Wars, series such as Star Trek, amongst many others. Starting from their humble beginnings as cheap pulp comics and stories in magazines, I discuss the history of SF (Ashley, 2008; et al), and continue through to the inspirations behind the trans/posthuman creatures seen therein (Haynes, 2014; et al). In addition, I discuss the ethics and real life issues brought to the table by SF works (Pheasant-Kelly, 2015; et al), as well as themes of race and 'otherness' that SF, successfully or otherwise, brings to the table.

Media forms having been explored, the following section instead turns to the people behind these shows and games' success – not just the developers or showrunners in this case, but the fans themselves. In this fan-studies literature review, I discuss first my interesting position of being an academic and fan (or 'aca-fan') (Cristofari and Guitton, 2016), which other scholars have observed in their own research, and how it can enhance, or indeed, even hinder my work. Next, I discuss the ideas of fandom both in

reference to Japan's media (Leonard, 2005; Chen, 2012; et al) as well as the fandom of video games (Postigo, 2008; Geraci, 2012b; et al), segueing nicely into the discussion of online fans and fan communities, video-game based or otherwise (Dunlap and Wolf, 2010; et al). Finally, I discuss the concept of fan conventions and societies, such as Comic-Con, observed in various countries and cities around the world (Jenkins, 2011; et al), and is the basis for a pilot study which helped develop my final fieldwork.

Finally, the literature review concludes with my theoretical framework, which informs my above-stated research aims, as well as my methodology. Said framework sees my ideas of trans/posthuman ideas being spread rapidly and widely around media and fandom alike split into three main, interlinked sections; those of the 'body', 'identity' and 'power'. I discuss the literature that has informed my framework in its three major parts, with ideas of the 'body' and 'physical' alteration forming the base 'creatures' and 'transformations' seen in the transhuman (Geraci, 2011; More, 2013; et al), the 'identity' issues that spring forth from said changes (Lee, 2016; Pedersen, 2016, et al), and the changing (or perhaps unchanging) 'power' dynamics that result from these new identities and bodies (Jones, 1996; Cerulo, 2009; et al).

Chapter 2, or the methodology chapter, does exactly what its title suggests; detailing and giving background to the methodologies I use to conduct my fieldwork. I first discuss the methodologies I use which connect to previous science-fiction scholars, including semiotics (Berger, 2011), using signs to explore the ideas made present on the screen and in the sound of a given text, alongside the standard visual analysis (Cornea, 2011), textual analysis (Belsey, 2013; et al) and discourse analysis (Griffin, 2013). Next, I discuss video game-based methodologies, starting with discussing purely theoretical pieces (Berger, 2002, Apperley, 2006; et al), before exploring the use of 'questionnaires' (Hartmann and Klimmt, 2006), the exploration of 'message boards' online (Geraci, 2012a), and the exploration of video game mechanics themselves, such as 'glitches' (O'Gorman, 2015).

As such, I discuss my reasoning for choosing case studies as my primary source of research, using textual analysis and semiotic study for texts I selected as having great analytical potential. Following this, I give a brief synopsis of the games (*Xenoblade Chronicles/X*) and film (*EX_MACHINA*) that I chose, of their basic plots, their genres and sub-genres, and their success in the general gaming/film market, to ensure I had

picked media texts that had truly 'stood out' to study at length. As for my secondary methodology, I select some examples of 'fan-studies methodology' such as 'ethnomethodology' (Berger, 2011), the exploring of online communities (Dunlap and Wolf, 2010), and observational study at convention sites (Jenkins, 2011) and discuss how they informed my short-lived pilot study during May 2016's Comic-Con in London, where I had originally planned to interview fans there, but instead settled on interviews in a more mundane location due to the difficulties of reliably finding respondents with my resources at the time. Said interviews are the final topic discussed in my methodology chapter, and I discuss their nature; combination face-to-face and 'phone' (skype/discord) interviews, semi-structured to improve the flow of conversation and allow for more natural and perhaps interesting and unexpected answers. The questions I use to start each discussion are also listed, as well as a discussion on how my respondents were chosen from various academic departments and fan circles to improve the range of answers. Finally, a table showcases the (anonymous) respondents, the general time and place of their interview, and their occupation.

From here, the thesis is split into the three thematic chapters following the order of 'body', 'identity' and 'power', with each section showcasing the results of the case studies and the interviews, and how these media texts and their fans show just how ingrained trans/posthuman theory has become in popular culture. Chapter 3 begins this process by looking at the visceral, the technological, and everything inbetween with the 'body'. Xenoblade Chronicles' case study begins as most sections from here do, with a quote from the late, great Satoru Iwata and the developers of Xenoblade, which I feel helps contextualise and find a link between the ideas they discuss in their creations, and mine. Here, I explore the themes of the cyborg, of body modification, and even transcendence and deification as they make themselves known in the narrative of *Xenoblade*, tying the instances of trans/posthumanism in not only the lore, but also the gameplay of Xenoblade. This displays how both character and player become something 'different' as the game progresses, alongside all the transhuman beings that the player encounters. Next, I move towards Xenoblade Chronicles X, and how it handles these issues compared to its predecessor. Despite using a more 'hard sci-fi' setting, I discuss the heavy transhuman themes behind the replacement of the entire human race's bodies in the narrative with near-identical machines called 'mimeosomes', as well as the cataloguing of all organic life and how this technology is

exploited and perverted as the plot continues. As far as gameplay ideas of bodily change are concerned, the use of robotic exoskeletons outside the already mechanical humans makes for a unique idea of which body, if either, can be considered 'real'. Next, I discuss the body in relation to *EX_MACHINA*, where the narrative revolves around the relationships between two humans, one outsider, and one creator, and the latter's female-presenting robots, including Ava, who is also given very similar functions to a human, complete with a 'wetware' brain that is stated to be able to develop much like a 'real' human's brain. At the end of the chapter, I take the key samples from my interviews, complete with the most notable quotes, and explore how many people recognised the ideas of trans/posthumanism, alongside the idea of bodily changes such as the cyborg and genetic modification (and how these could be applied practically), revealing potential alternate case studies that reveal just how much thought fans of all kinds give to these ideas.

Chapter 4, then, takes this theory one step further and considers what happens once the body has been changed, and how 'identity' can change after the fact. Returning to Xenoblade Chronicles, I discuss the identity crises brought about by the changes in not only the bodies of the characters, but also the world(s) that they live in. In this case, they literally come to life, and are disturbingly human in their shared origins, and the protagonist in particular is shadowed against the main antagonist, and have opposing views on how far a human, or 'god', can be allowed to evolve. In the case of *Xenoblade* Chronicles X, identity is constructed again around the mechanised bodies of the cast, but the nature of humanity is called not only into question by this notion, but also that of the revelation that they may not be able to change back. This is supplemented by a discussion about the gameplay of X, and how it allows players to choose their avatar's identity, as well as interact with other players in an online setting divorced from the game's main narrative, creating an interesting experience explored by a special interviewee I prepared. For EX_MACHINA, identity is explored through the claustrophobic experiences the main human character, Caleb has between his interactions with the robotic Ava. Identity issues with both sides doubting their 'humanity' make for an interesting theoretical dilemma, and the antagonistic robot designer Nathan serves as the intermediary, and his identity as the 'mad scientist' is also explored. Finally, the interview section discusses how respondents feel about the identity of being 'transhuman', and famous series such as Blade Runner and Ghost in

the Shell are discussed, as well as the interesting 'cyberpunk' aesthetics and identities that come about as a by-product of these texts.

Finally, we have Chapter 5, which consolidates both body and identity to discuss the 'power' relations that are created, or reconstructed, through said new identities. Returning one last time to *Xenoblade Chronicles*, I explore the extreme power wielded by the posthuman entities such as the 'god' Zanza, and how the characters (and player) must 'level up' and improve themselves, through modification of a kind, to defeat their nemesis. As such, this chapter explores the gameplay elements of Xenoblade most closely, looking for instance at the 'skill tree' system, which the player can dictate the 'evolution' of. For the 'power' dynamics of Xenoblade Chronicles X, I discuss, amongst other things, the motivation of the villain, who explores the lack of choice the 'weak' and 'poor' had in dictating their fate, of themes that very much mirror those in our world today. In addition, I explore the combat gameplay of X, and how it builds upon its predecessor by necessitating the use of extreme powers to combat extreme enemies, which tie in with the posthuman bodies that the characters in-game possess. EX_MACHINA sports instead more disturbingly realistic themes, with the aforementioned Caleb at odds with the antagonistic Nathan, who abuses his machinewomen and creates uncomfortable parallels to real gender and race related violence and power dynamics, which is played against said machines' desire to exercise their own power. My respondents in this case discuss the potentials for positive and negative use of technology and the posthuman, with a common 'doomsday scenario' simply involving capitalism controlling the reins of this technology as it becomes available, as is very much the case today.

The conclusion considers the future of trans/posthuman theory as well as the field as a whole. That said, one last interview-based section is dedicated to my research aim of showcasing the spread of these themes, and my respondents in turn discuss how and why they consume the media and use the technology they do, and how there is a fundamental difference between the processes of consuming screen media and video games, particularly when framed through the lens of trans/posthuman theory. Furthermore, I discuss the limitations of the research I have done, the missteps and problems I encountered along the way, and instances in which my research did not fully contribute to my research aims. And finally, this chapter contains my own concluding

thoughts for the thesis as a whole, and whether I believe I've thoroughly explored my research aims and my hopes for further research on the topics I've discussed in my years developing this work.

Then, without further introduction, the first chapter, the literature review, awaits on the next page; an exploration of humanity, 'humanism', and the 'trans/posthuman'.

1.1: Classical Humanism - Liberal and Secular/Social

For centuries, humanity has indulged in the study of itself, and before moving on to the greater ideas at work, it's important to remember where these studies began. And in this case, liberal and social humanism both serve as points of particular interest as far as this branch of philosophy is concerned, as well as in the later points of this thesis, where I discuss video game and film theory – it all returns to the idea of 'enriching our lives', and having the capacity to teach and help others. Indeed, the idea of 'humanism', of a philosophy centred around the influence of mankind on the world as opposed to any god or deity has been an idea discussed, criticised, and distributed for centuries, and has taken many forms, eventually evolving into the transhuman and posthuman branches that take up the centrepiece of this work.

In this case, what we know now as 'humanism' went through various changes and schisms before the modern age, and its initial form was that of what is known commonly as 'Liberal' or 'Renaissance humanism' (Kristeller, 1978, 586). As Kristeller describes, it was a historical movement that originated in fourteenth century Italy, that developed for two centuries before eventually expanding across mainland Europe in the sixteenth century, being based on common ancient, medieval, and Byzantine sources, it laid the groundwork for western civilisation as we know it today. It involved scholarly and literary developments, a reform of handwriting, and of education in general (ibid), and set up social and political prerequisites for concepts such as lay professions and of secular culture in general, finding new 'cults' that didn't involve the Christian hegemony that had been dominant up to this point.

That said, this burgeoning idea of 'humanism' had its own issues too. For one, this system, being as it was created in the fourteenth century, was still steeped in the traditions of its time; girls and lower-class boys were still largely excluded from education, reflecting the sexism and classism of the time; and there was still an air of elitism about education that would remain for centuries to come, where there was 'no

room for those with no talent or property' (ibid, 587). It's at this point Kristeller makes it clear that the 'humanism' is very much different from what is understood today, as the term doesn't really originate from that era at all (ibid, 588), instead being a nineteenth century description of the morals and values that began to take shape during that period, where instead a 'humanist' was instead just being known as a 'student of the humanities', and implied an intellectual broadness rather than the autonomy of humanity.

To contextualise the idea as it came to be known, of the idea of humanitarianism, of cooperation between humans, and equality, as well as contextualise it in a way that fits thematically with the content of this thesis, consider Bernardi's (1997) look into the themes and ideals that helped create Gene Roddenberry's original Star Trek series, which ran in the 1960s, during a time where these ideas were starting to take shape in forms such as the African-American civil rights movement, amongst other things. In his article, Bernardi posts a quote from Roddenberry describing the very humanistic motto of the series (Bernardi, 1997, 209); that 'we must learn to live together, or most certainly we will soon die together'. Star Trek had been championed as a show which showcased an 'egalitarian world' (ibid, 210), one which was free of then-current rampant social issues such as racism, sexism and capitalism, imagining instead a future where everyone had equality travelling through the stars – Bernardi points to the episode 'A Journey to Babel' (1967) as an archetypal example of such an episode, in which we see not only a retelling of the 'Noah's Ark' story from the Bible, but also the ideas of the difficulties of being a 'half-breed' when dealing with members of both races involved. In this case, it is the character Spock, who is both human and 'Vulcan', a fictional alien race from the series, and whose childhood was fraught with abuse from both humans and Vulcans.

That said, Bernardi also discovered that the series did have problems integrating these ideals, particularly when it came to race, finding it 'disturbingly contradictory' (ibid, 211), and failing to sufficiently embrace diversity even by the standards of the 1960s. For instance, several characters were still stuffed into very stereotypical roles and plot arcs, such as Jóse Tyler, a Hispanic character with an unfortunately archetypal 'failed latin lover' plot arc (ibid, 215). In addition, the much-celebrated interracial kiss between Captain Kirk and Uhura was an incredible step forward for television, though as Bernardi notes, it was almost cut due to the controversy surrounding it at the time,

having been inches away from being replaced with a Spock/Uhura kiss instead (ibid, 216), in order to avoid fallout from the southern state. Furthermore, Bernardi makes a point to state that despite that moment, Uhura is otherwise a token minority actor otherwise, with no significant plot roles or moments other than that stated above (ibid, 218). Ultimately, Bernardi concludes that despite visions of an egalitarian universe with equal rights for all, the creators could not escape the 'paradox of the liberal-humanist zeitgeist' which had the 1960s in its grasp.

Campbell (1998) also discusses the difficulties of liberal humanism in his work on humanitarian aid, and how it can be contradictory with the operation of aid and relief efforts in dangerous and polarising situations (Campbell, 1998, 498) – specifically, Campbell looks at areas such as Bosnia, Rwanda, Somalia, and other places which at the time were in the most need of humanitarian aid. As the conflicts develop, it becomes more difficult to distinguish 'good' from 'bad', or 'aggressor' from 'victim', leading to interesting moral dilemmas as humanitarianism becomes clouded and mired in ambiguous and ever-changing politics. As such, Campbell discusses that despite promises of a 'new humanism' being adopted by the EU parliament of the time, it would prove to be no different from the old one (ibid, 499), and thus aid agencies are left wondering if the Hippocratic oath of 'do no harm' can apply in these complex situations. This is compounded when the provision of assistance often 'fuels' the conflicts that said aid seeks to end, which diminishes neutrality, and at worst, could support tyranny and oppression.

Returning back to the 1980s, there were shades of a different, more radical humanism emerging in the United States, that of 'secular' or 'social' humanism, which stood in the midst of the highly conservative Christian USA of the time, and had similar facets to liberal humanism in its aim for universal human rights and equality, but with a decidedly anti-religious stance, instead creating a 'religion of man'. Naturally, this would be something that the establishment would rally heavily against, as this time there was a clear 'target', an 'enemy' disrupting the common way of life; so-called 'communism'.

Melichar (1983) discusses this at length, of how right-wing fundamentalists worked at length to ensure that so-called 'secular humanists' would be ridiculed and discredited at any cost to preserve the status quo of education and social life in the United States. He

notes an incident in November of 1982, in Jamul, California (Melichar, 1983, 55), in which parents rallied against 'journal writing', a seemingly innocuous diary-keeping exercise for the young children at school, but was targeted by the right-wing as a means of creating so-called 'change agents', that children would 'spill everything' and that it was a 'communist tactic', blaming what they called 'secular humanism'. This rather extreme hatred, Melichar continues, emerged when the 'old right' (who opposed sex and drug education) and the 'Christian right' (who opposed situation ethics, evolution theory, and free expression of ideas) merged to become the 'new right'. This 'new right' would aim to restrict liberal thought 'in the name of God and family', and any who disagree would be either 'secular humanists', 'atheists' and 'communists'. Depending on the context, or perhaps even lack thereof (ibid, 56), the term became synonymous with 'evil', its follower being 'socialistic, hedonistic, and anti-religious', but was never clearly defined, having become a new 'bogeyman' to sit alongside communism.

This fixation on education and the reformation back to the right-wing Christian basics is also touched upon by Toumey (1993), who discusses how in the past, evolution theory itself was seen as a heretical theory that causes not only 'moral decay', but also a 'host of social vices' (Toumey, 1993, 275). However, once the scapegoat of 'secular humanism' entered public consciousness, evolutionary theory became a feature of this humanism, shifting the blame to an 'organisation' rather than a theory. From here, Toumey discusses the history of what would be known as 'secular humanism' (ibid, 276). After a long-standing hegemony of Protestant cultural values in US society, the 1950s saw the US senate decide that better sex education was needed due to moral panics surrounding divorce, birth control and the decriminalisation of homosexuality, which was swiftly throwing this order into disarray. Fast-forward to 1961 (ibid, 277), during a case involving freedom of religion, the term 'secular humanism' came about as a conspiracy to blame, ill-defined and insignificant though it was, before being named an 'official religion' in 1965 by the Supreme Court.

Finally, in 1978, a law review was written by John W. Whitehead and John Conlan (ibid, 280), one which stated that 'secular humanism is a religion whose doctrine worships Man as the source of all knowledge and truth, whereas theism worships God as the source of all wisdom and truth', and that 'along with the evolutionary theory, the centrality and autonomy of Man are the prominent features of Secular Humanism'. In

this thesis, they had given 'secular humanism' a 'real' definition, something tangible, while also equating humanism with the likes of Hitler and Stalin, describing humanists as those who believe in 'no morals'. Most damningly of all, perhaps, came in the 1980s (ibid), where one Reverend Tim LaHaye wrote *The Battle for the Mind*, referencing the above thesis while adding 'lurid references' to pornography, homosexuality, drug addiction, abortion, and other topics that wold attract the disgust of the right-wing – even the act of 'giving away the Panama Canal to communists' was attributed to humanism.

Cimino and Smith (2007) later did a piece on the evolution of actual 'secular humanist' movements, or 'freethinkers' as they were sometimes called, in response to the constant criticism thrown against them by the US political climate. They begin by reminding the reader that as of the time of writing, laws in several states prevent 'non-theists' from taking up office (Cimino and Smith, 2007, 407), and states that this is just one of many laws proving that secularism is not even close to being widespread in the US, and at the time, such a scenario was seen by many social scientists as highly unlikely (ibid, 408), which raised concern for 'free-thought movements' around the country. In addition, The Humanist Manifesto II (1973) had been found to have removed any links with religious humanism (Cimino and Smith, 2007, 409), and the leading humanist group changed names repeatedly, settling on the Council for Secular Humanism in 1980, and have since spent their time influencing politicians and the media to attempt to gain ground. The pair also engaged in research on student 'secular humanist' groups in universities such as the former Campus Freethought Alliance, interviewing people from these groups via meetings and performing content analyses on their magazines (ibid, 411). They concluded that the expansion of secular humanist and freethought groups are filling a niche that religious humanists have vacated, the latter having taken a higher interest in spirituality, and that despite the numbers of secular humanists not rising, the 'culture wars' between their groups and religious groups would continue for years to come. That said, in the present day, Torrance (2019) has noticed that many transhumanists have been reconnecting that old link between transhuman ideas of immortality and godhood with the idea of Jesus Christ and the idea of 'theosis', to become god-like (ibid, 178)

Finally, the discussion of what would come to be known as 'social humanism' is touched upon by Ellis (2012), who describes it as a 'moral and political philosophy'.

Here, Ellis describes it as requiring the establishment and development of a new welfare state (Ellis, 2012, 1), and a framework for a series of agreements between states on 'global, social and moral issues', as well as the development of human rights, creating 'universal assent'. Ellis also notes that it is very similar to Kant's theory of social idealism, but claims it to be metaphysically realistic, and based on the social ideals of 'ordinary' people, rather than 'perfectly rational' individuals. Similarly to what Melichar and Toumey discussed in their works, Ellis cites the stifling of progress towards this humanist goal as being the handiwork of figures such as Ronald Reagan and Margaret Thatcher (ibid), whose right-wing politics ended up damaging the welfare state that had spread around and been widely successful throughout the world, both economically and socially – remaining so to this day in the countries of Scandinavia and much of northern Europe. That said, the bogeyman of socialism once again could not be escaped, and by the 1970s, the 'widespread suffering' that necessitated the welfare state's existence was no longer as evident, and neo-liberal thinkers saw fit to remove it, deeming it unnecessary, as many thought that the only choices they had were 'outright capitalism or socialism' as Marx had originally defined them. Therefore, Ellis puts forward (ibid, 3) the ideas behind his version of 'social humanism', which requires social contractual utilitarianism, egalitarianism, as well as a 'real equality of opportunity', creating a society that 'is compatible with the basic human values of compassion and honesty'.

The next section, however, deals with the truly modern interpretations of the word 'humanism' – and those who imagine a world where such ideals run rampant, and have shaped not only society, but the world itself. Indeed, Harari (2015) makes a point that connects these sections, that the evolution and change of humanism inevitably leads to humanity seeking only to perfect itself, and evolve (ibid, 319), with the main products of the 21st century being 'bodies, brains, and minds'.

1.2: The Birth of the Anthropocene and Humanity losing 'Humanity'

In order to provide further context for the so-called 'human journey' that the transhuman and posthuman theorists would prepare us for, it would be fitting to check in on more intricate 'human' theory, particularly in regard to ideas of the

'anthropocene' (the human-changed world), and 'anthropocentrism' (humans being at the centre of everything), which begins with even the earliest ideas.

In his recent work, *Digital Materialism* (2018), Baruch Gottlieb described the 'anthropocracy', discussing how we ascribe modern technology as being part of us constantly, while also ignoring the common workers, and the 'human element' that goes into creating said technology in the first place (Gottlieb, 2018, 1). From here, Baruch describes one of the earliest forms of ascribing 'human meaning' to objects we did not create – language. The example he uses first is the 'apple', first named to give a human expression for the apple fruit, it soon came to mean other things, such as Biblical 'deception' as seen in the story of Adam and Eve, as well as the company Apple; and its computers, phones and other technology. Therefore, words and language themselves were a way in which humans gained 'power' and 'precision' over nature; Gottlieb using the onomatopoeia we use for dogs 'barking' to detail our own comprehension of how dogs communicate and how many languages share this trait – in his words, 'language is as much about control as it is about expression' (ibid, 13). This is a view shared by Badley (2018, 422), as he also discusses the idea that language is our own construction, our own limitation of the world.

This kind of 'technology' itself developed as time passed, and people soon began to fear change and progress as a 'loss of humanity', or at least of human development, despite that very change being completely human. Communication itself had a contentious and staggered history, discussing the power the 2-D image has, paintings and pictures, and how early theorists such as Jewish prophets and pagan societies began damning the 'image' as 'idolatry', making real what was previously 'mystical' and inherently understandable by the 'intellectual' (ibid, 21). This cycle would be repeated with the spoken word and its transition into language and writing, a process which Plato famously feared for the same reasons as those prophets of old; that when knowledge stopped being discussed only amongst humans and became 'static', it would force people out of this 'mythical world', and as Gottlieb describes, into a 'new age' of freedom, individuality, and one that stripped humanity of its 'origins' (ibid, 24).

New developments like this brought with them a new shift in power, as more of the 'common folk' became literate – ideas such as 'social justice' and 'fairness' became prominent, as beforehand, knowledge was only in the hands of the powerful, and

suddenly things were no longer 'mystical' and 'as they are' (ibid, 32), with more people able to control their own lives and stations through this new way of learning and communicating. Religion too developed as a result, as the Torah and other religious scriptures began creating 'rules' which governed how the universe was supposed to work (ibid, 26), and alternative means of understanding such as atheism and science partnered together as more was discovered about the world we lived in. And this development continues today, with Flusser (ibid, 50) claiming that there is a need for 'new Humanisms' which are based on things that we may not even have experienced yet, or things that we could experience which are far removed from the current state of 'humanity'.

As such, throughout *Digital Materialisms* is a discussion on how exactly technology changed humanity, and how it changed technology in turn. For instance, Gottlieb describes that even the nature of computers is 'human' in design, as digital data needs sensory input from people (ibid, 71), and without it, data is subatomic and invisible. Furthermore, due to the rules placed upon them, computers and their insides are not 'free'; Gottlieb suggests that they instead make human life seem comparably 'free' due to the restraints that their coding places upon them. The digital age has also seen resurgence in Plato's idea of 'static knowledge', or 'data' in this case, not being what true knowledge is, a theory also shared by Alfred North Whitehead, the logician (ibid, 85). Furthermore, this idea of distancing humans from technology is purely aesthetic, and very transparent – digital devices such as modern mobile phones or tablets are 'clean', and 'mysterious' looking, with a futuristic edge (ibid, 90), but Gottlieb notes that 'the last task of the labourer is to remove the traces of its labour'. As such, nothing remains that seems human, but people are largely aware that this is still a human creation.

As humanist thought continued, however, 'extreme disciplines' (ibid, 107), as Gottlieb puts them, would have the 'rich and powerful's pockets overflow', and people would go mad to achieve ends such as human immortality and mastery if possible, but the truth is that Humanist science would 'first benefit industry', perhaps ignoring personal transformation in the face of potential profit – Gottlieb also quotes Feuerbach here (ibid, 109), who states that 'What man calls Absolute Being, his God, is his own being. The power of the object over him is therefore the power of his own being'. Gottlieb then has posthumanism as a different entity to transhumanism, and maintains that it

exists as a critique of humanism itself, framing it as a natural phenomenon which cannot be removed from the universe, therefore any attempts to remove oneself from humanity would be fruitless, as even technology and its creation are extensions of this idea – we have, in his words, created a 'domesticated world'.

Jussi Parikka discusses the idea of the 'Anthropocene' in his chapter 'Planetary Goodbyes' (2017), beginning with the idea that SF works are an imagination of the 'future', namely one similar to that seen in *Blade Runner*; where Los Angeles is a cultural destruction, merge, and recreation, a vision seen then as an 'un-American' future (Parikka, 2017, 129), and that the 'ruin' of the future always seems to hint at a future without humanity. This creates, as he puts it, a 'post-history' where 'mediatechnological contexts are part of the memory of future-pasts', representing scientific progress.

Parikka continues with the discussion of the term 'Anthropocene', following the Holocene era, discussing the focus on human intervention, and 'new notions of human and technical agency' (ibid, 132). That said, he goes one step further and discusses the notion of 'post-planetary' literature, looking at Erkki Kurenniemi, Finnish art pioneer, and his vision of the year 2048 (ibid, 133). In this 'vision', Erkki describes a future without the physical body, or a 'slimy existence of the flesh', and recalls 1980s fantasies where the technology of the future can reproduce the past as memories for a 'future mankind' that lives in space as a 'digital format', perhaps pure data inside a space-faring computer – the brain becomes software, but humanity and its shape, memories and experiences are continually remembered and reproduced. As such, Parikka suggests that memory always takes place in and across collectives, and that we must make 'sense of the contemporary', as Kurenniemi joked that these space-faring Als of the future wouldn't know what possessed us to abandon the Earth in such a scenario, as our form and ideas are there, but not cultural context or socio-political or economic conditions. Humanity would continue, but intelligence would be 'deterritorialized from human capacity to machinic entity' (ibid, 134).

This idea of a distorted, but familiar humanity is discussed in Page and King's chapter in *Posthumanism and the Graphic Novel in Latin America* (2017), where they discuss dystopic texts from Argentina and Uruguay, and how a unique 'post-anthropocentric' view is beginning to emerge, as they too believe that humanism is 'rampant' within

posthumanism, and is 'forever rewriting itself', being 'nostalgic' for itself (Page & King, 2017, 23) – and that even 'antihumanist' literature mourns for a loss of humanity. Highlighted are Diego Agrimbau's graphic novels, which are described as 'antihumanist' fables which map out dystopian visions of environmental exploitation or enslavement to modernizing progress, and predict the disappearance of humanity, all based on the socio-economic conditions of 1990s Argentina (ibid, 24). This dystopic future vision is compared to other media of the same type, including *Blade Runner, Planet of the Apes, Gattaca* and 'even *WALL-E*' (ibid, 25), and represents the 'immense technophobia' we collectively have despite our obsession with furthering technology. Here, Page and King discuss Daniel Dinello's view that this obsession stems from the 'progressive politics' of sci-fi; that it awakens us to an idea of corporate greed, 'machomilitarist' posturing and techno-religious propaganda. This in turn 'erodes' human values such as empathy and equality, as the technologies shown in SF imagine 'genetic discrimination, surveillance, totalitarianism, addiction, mind control, and destruction' (ibid).

Their criticism continues with a discussion on western culture, and how it continues to obsess over its 'ability and right' to expand and dominate the universe through capitalist modernity, which authors like Agrimbau and Ippóliti challenge in their works *Planeta* Extra and La burbuja de Bertold, which reject a future in which we become indistinct from the technologies we have created, and as a result are 'at odds' with many other popular authors in the genre (ibid, 34). This idea of bodies and technology is discussed by Lyotard (ibid, 38), who asks whether thought can go on without a human body; transhumanists and extropians would say 'yes', as in their view the body is merely 'hardware' to the mind's 'software', with downloads and uploads of all kinds possible. However, Lyotard would claim otherwise, believing that real thought is indivisible from the body, and perceptual experience – which is different from the logical thoughts of the machine, distinct from the 'analogical' thought that removing the body would leave behind (ibid, 38). As such, they discuss Sanz's critique (ibid, 44) of this post-biological posthumanism, and the idea is very much the same; a posthuman world would have to be 'embodied', rather than 'virtual', which is central to posthuman texts that are not 'antihuman'.

In another chapter in *Posthumanism and the Graphic Novel in Latin America*, Page and King discuss the idea of a completely non-human event and its impact on SF works

which were created in reaction to it. In this case, it involves the 'Tunguska Event', which occurred on the 30th June 1908, Siberia. On that day, a gigantic explosion in the sky, possibly a meteorite breaking up in the atmosphere, killed hundreds of reindeer and flattened 80 million trees; the true nature of the massively destructive event is currently still unknown (Page & King, 2017, 163). A little over a hundred years later, Alexis Figueroa and Claudio Romo wrote *Informe Tunguska* (2009), which captures the 'apocalyptic character' of the event in a report which changes the time of the event to the island of Chiloé, during Pinochet's coup in 1973, and suggests that the meteor was responsible for genetic mutations, and was connected to Pinochet's regime's repression. Ultimately, the story is described as opening up a post-anthropocentric understanding of human culture, one that does not focus on how human projects forms onto nature which are formed from human language (ibid, 181), but rather how human culture emerges from forms of nature itself – as humanity cannot escape the shackles of this world and nature, at least not yet.

Similar to the discussion on 'ownership' and 'domination', Rosi Braidotti discusses the ethics of our 'geno-centric' world, and how the focus on the capitalist production behind these transhuman endeavours may instead be whittling away what we need most, the 'ethical fibre' of our era, responsible for social justice and ethical consciousness – she cites the common media trend of 'the end of ideologies' as responsible (Braidotti, 2018, 23), which cites Marxism, communism, socialism and feminism as 'old things' that have no place in a post-Berlin Wall world, one where people are told to 'mind their own business'. However, she sees paradoxes in this creation, that post-industrial culture asserts this 'end of ideology' as the conservative fantasy of an 'immutable and unmovable' human nature, and yet everything is 'new' (ibid, 24); we have new technology, new lifestyles and gadgets to match, and yet a complete social rejection of change, and transformation.

Braidotti instead brings forward the opposition to this 'master narrative' in the form of Donna Haraway and her ideas of the 'informatics of domination' (ibid, 25), under which Braidotti stresses the need for a 'materialist, nomadic philosophy of becoming', in order to produce a sustainable future. As such, 'transpositions' are suggested (ibid, 26); which indicate intertextual, cross-boundary, or transversal transfer from one code, field or axis into another – playing the positivity of difference as a specific theme in its own right. For instance, Evelyn Fox Keller has transposition refer to processes of

genetic mutation in a nonlinear matter. However, Hilary Rose (ibid, 27) uses it to refer to genetic change under the control of the organism itself, as no particle of matter is independent and self-propelled, which could be applied to even posthuman entities that have a very likely human origin.

Ultimately, this idea of returning to the human is summed up in Schönfeller's work on 'posthuman nostalgia' (Schönfeller, 2017, 265), and how author Michel Houellbecq uses his work to explore ideas of sexuality, love, desire, and aging, and how these things could be removed in posthuman beings. For instance, in *La possibilité d'une île* (The Possibility of an Island, 2005), there is what is described as a 'paradoxical representation' of human emotions (ibid, 272) – leaving behind the human sphere of emotions and moving into the sphere of posthuman affect seems to be impossible for the characters, who have moved into posthuman bodies. Instead, they use clones to record and repeat their nostalgic longing, and idealise the human as they denounce their posthuman existence.

As such, returning to Gottlieb's work, he discusses Hegel's idea of the 'night of the world', the terror of existence and the realisation of our place in a world, a system in which humans cannot escape (Gotlieb, 2018, 19) – to what extent have humans gone to in order to reach this 'posthuman' ideal, and how have they achieved it? The next section will discuss what exactly it meant to become a transhuman... or a posthuman.

1.3: Introduction to Trans/Posthuman Theory

This section seeks to identify the key philosophies that run throughout this thesis, that of transhumanism and posthumanism, and the theories that make up this philosophy today, by examining its theoretical and cultural history, and how it has been developed and criticised over the past near-century. This chapter will explore the cultural history of the transhuman, and of early modern transhuman theory, before moving on to critical works on the subject, before ending with the most current theory, and identifying the themes that are present and prominent in the texts studied. First, however, there has

always been debate as to the exact definition of the trans/posthuman, and its various relative theories and offshoots.

1.3.1: Constructing the 'Posthuman' – Definitions, History and Culture

Nick Bostrom, one of the key voices in the trans/posthuman academic circles, describes the 'transhuman' as a way of considering a future based on the idea that humans still have room to evolve, using science and technology as a catalyst (Bostrom, 2003, 4). As such, the resulting 'posthuman' is the species that would result from this radical change, something distant from current humanity as apes might be to humans (ibid, 5). Although a powerful and apocalyptic seeming statement, this is but one popular definition. Ferrando, in his 2013 work, suggests the definition that this thesis follows - that the 'posthuman' has become an umbrella term that encompasses theories of the 'developed human' in philosophical, cultural and critical terms, including trans/posthuman ideas, new materialism, and various other 'metahumanities' (Ferrando, 2013, 26). Said metahumanities include antihumanism, a theory suggesting the 'death of man', a theory more in line with Bostrom's idea of the posthuman (ibid, 31).

The history of this trans/posthuman thought has led to these collections of definitions and has been considered by many scholars who study this theory today. Notably, Bostrom, amongst others, have considered how far back the concept of changing and altering the human form stretches, and how this relates to this modern theory. In his *Transhumanist FAQ* (2003), Bostrom describes the 'cultural antecedents' of transhumanism, making reference to the burial practices of the ancient Egyptians in their hopes of bringing their mummified bodies to the next life, as well as the *Epic of Gilgamesh* of Akkadian lore, involving the pursuit of immortality (Bostrom, 2003, 38). Another mythological comparison is made in the description of Greek myth, where humans are often deified and stand amongst the pantheon of gods, and how this led real Greek philosophers to begin thinking not based on pure faith, but how they can physically acquire 'power' (ibid). Antiquity was not the only era looked into by these transhuman historians. For instance, Hughes (2012) went on to identify quasitranshuman thought in the European Enlightenment of the 1700s, where a chief tenet of the movement was to create a 'new world' based on 'reason, science and technology',

in order to create a utopian, egalitarian commonwealth where machines would free all humanity from work and toil, disease, and even death itself (Hughes, 2012, 758) – a belief not so distanced from current, techno-utopian transhumanists. Bostrom also explores the 18th and 19th centuries (Bostrom, 2003, 40), citing these periods as the time when humans began to see themselves as truly malleable through the power of a burgeoning science. Benjamin Franklin and Voltaire were amongst those who began to speculate using medicine to extend the human lifespan, and the appearance of Darwin's famous theories expanded these views with the concept of 'artificial evolution' emerging, However, Bostrom notes that the optimism of the 19th century often degenerated these theories into 'narrow-minded positivism', with the widespread belief that progress was 'automatic' and unchangeable by humanity (ibid). Hughes also refers to the impact of this time period, making note of the Mormon doctrine of one Joseph Smith, who suggested that all human beings can become 'gods', and took some of the first steps into the infamous practice of eugenics.

As the 20th century emerged, however, it would soon become clear that this would be the most significant age for supporters of the trans/posthuman, as well as where the term itself would emerge, beginning with this concept of 'eugenics' and genetic engineering. In his History of Transhumanist Thought, Bostrom (2005a) discusses the British biochemist J.B.S. Haldane's work Daedelus: Science and the Future, in which Haldane makes the claim that great benefits would come from controlling our own genetics, as well as the general use of science for improving mankind; projecting a future society in which people were richer, taller, smarter, amongst other things (Haldane, 1924). It was at this point that Haldane also noted the beginnings of resistance to these ideas, as his concept of ectogenesis (artificial wombs) was seen as blasphemous and a Promethean 'insult to god' (Bostrom, 2005a, 4). However, Haldane's work would go on to become a best-seller, and spurred much thought on genetic enhancement, as well as bionic implants. An age of clashing ideals, Bostrom describes the pessimistic attitudes of Bertrand Russell, who feared that this power would only allow men to harm each other more and spread disorder – a fear that others would come to share (ibid, 5). At this time, H.G. Wells, and other famous protoscience-fiction authors brought these ideas to the masses, ensuring that everyone began thinking about this concept of 'evolution'. Eventually, towards the middle of the 20th century, this concept of engineering 'better' human beings culminated in the creation of various state-supported eugenics programmes, in America, Canada, and various countries in Europe (ibid). It was here that the darker side of these ideas began to show themselves, as human-rights violating sciences began to take place, with the enforced sterilisation of many disabled and homeless people in these countries in order to 'weed out the unfit'. This would come to be supported by many on the extremes of politics and by many in government - but have since been universally condemned after the Nazi Party's infamous and genocidal use of the science alongside the Holocaust. It should be noted that the origin of Transhumanism as a term came about during this period, with biologist and known eugenicist (Harrison and Wolyniak, 2015) Julian Huxley writing in 1927 that the human species is capable of 'transcending itself', while remaining true to human nature.

It was after this point that the idea of the 'transhuman', as it was coming to be known, turned away from the now maligned practices of eugenics and towards a brighter future of scientific progress through space travel, medicine and computers, all of which were still in their infancy compared to the modern day (Bostrom, 2005a, 6) – and indeed, science fiction moved to match this, with Arthur C. Clarke, Isaac Asimov and many others using these new, exciting concepts in their works, keeping interest flowing even more freely due to the development of cinema, where depictions of old ideas such as the Jewish myth of the Golem were reborn as Frankenstein's Monster, amongst many others (ibid). It was around the late 20th century that trans/posthuman literature truly began to take root, with F.M. Esfandiary, or FM-2030 as he came to be known (due to his rejection of collectivist names and his desire to live to the year 2030, his 100th birthday) writing on the subject (ibid, 11). In addition, singularity theory (the idea that the creation of advanced AI will rapidly speed up technological and human progress) was established in 1965 by I.J. Good, and was expanded by Vernor Vinge in 1993 (Hughes, 2012, 764), which led to a fascination with AI theory.

1.3.2: The Modern Transhuman – 20th Century Theory and Beyond

As the 20th century brought these sciences further into the public eye, trans/posthuman literature began to flourish, laying the foundations for many works, both supporting and critical, of the modern day. Donna Haraway is known for writing one of the most

influential pieces (1987) on a concept that had been fascinating those studying the trans/posthuman or otherwise. This idea is the cyborg, fusion of machine and organism (Haraway, 1987, 1) that she relates to socialist, feminist, and materialist theory. In this piece, she acknowledges that the 'cyborg' had mostly been known, until that point, to inhabit science-fiction works alone (ibid, 2) – but with the rise of bionic technology and other prosthetics, Haraway makes the argument that we are all 'chimeras', and the cyborg is our 'ontology'. Using the cyborg as a way to codify new ideas of gender, sexuality, and other 'common dualisms', Haraway makes a very pro-science and protranshuman argument, stating that she would rather be a 'cyborg' than a 'goddess' (ibid, 37). A continuation of the 'posthuman' as a combination can be seen in Hayles' work (1999), where she states an earlier example of the posthuman as an 'amalgam' that 'constantly changes and reforms itself (Hayles, 1999, 3), as well as something that evokes 'terror and pleasure' in near-equal amounts. This work includes another rejection of the extreme and transformational idea of the posthuman, as Hayles states that the human and posthuman can coexist together in many ways, without a complete culture clash (ibid, 6). It was around the time of this writing that Max More, a notable figure in trans/posthuman theory, began to 'spearhead' the current movement (Adorno, 2010, 348), having since become head of the Alcor Life Extension Foundation, and having written many articles on the subject. Adorno details More's beliefs as those of a liberation through change in physical existence even to the ends of a new consciousness, evoking a powerful transhuman 'aesthetic' (ibid) that typifies modern trans/posthuman theory – the same kind, perhaps, that Hayles describes can evoke 'terror and pleasure'.

These more apprehensive feelings and thoughts towards trans/posthuman theory were the focal point of many critics of the philosophy, scholars who Nick Bostrom refers to as 'bioconservatives' (Bostrom, 2005a; 2005b) – Bostrom himself having referred to opponents such as Leon Cass, former Chairman of Bioethics for the Bush administration, who has stated that the transhumanist movements have the potential to 'dehumanise us and remove the meanings of life'. Incidentally, this is the particular stance of Fukuyama (2004), who opposes trans/posthuman ideals based on the antithesis of Bostrom's take on posthumanism, of the changing of mankind into something unfathomable to modern man, asking 'if we start transforming ourselves into something superior, what rights will these enhanced creatures claim, and what rights

will they possess when compared to those left behind?' (Fukuyama, 2004, 42). Going on to criticise the advocates of transhumanism for not understanding what a 'good' human being is, praising the adaptability of humans without becoming unrecognisable – ironically, this seems to be an ethos similar to Haraway's transhumanism (ibid, 43). Reacting to Fukuyama's ideologies is Bart Simon (2003), who writes a critical piece on an earlier work of Fukuyama's, in which he reviews *Brave New World* by Aldous Huxley (1932, a science fiction story where a dystopian, posthuman future is ruled over by a dictatorship that uses biological science to control the population). Here, Simon seeks to prove that instead of this dark future that Fukuyama bases on a 'popular form' of transhumanism (Simon, 2003, 2), that trans/posthuman theory brings up these ethical ideas and often rejects anything that would violate human rights. Instead, taking a critical look at both the pro and anti-posthuman sides, Simon states that the posthuman is not, in fact, a radical break from humanism, but rather an ongoing critique of what it means to be human, again resonating with Haraway's ideas, and further supporting the idea that Fukuyama's ideas may not be so incompatible with the theory.

Annas, Andrews and Isasit wrote a piece (2002) that was notably criticised by Bostrom as a bioconservative piece (2005a) and is one work of many that condemns the practice of genetic engineering and the potential return of eugenics. In it, the scholars consider the creation of a law banning the use of intentionally modified genetic material in any human cloning process, citing past tragedies with this science (Annas et al, 2002, 151). They go on to explain that to alter a fundamental characteristic of the 'human' must be a decision approved by the entire world in a massive peer review (ibid, 153), in order to prevent the misuse of biotechnology from potential madmen that could bring about 'neo-eugenics' and 'genetic genocide' (ibid, 173). Though a piece criticising his philosophy, Bostrom concurs that a middle ground could be reached here, as his (and most) versions of transhumanism also reject eugenics as a practice for similar reasons (Bostrom, 2005a, 19).

More recently, Adorno (2010) puts forward a much different critique of the transhuman or posthuman; that of its 'aesthetics'. Adorno notes that there is a vast amount of different theories on the posthuman, and that a lot of them simply aren't possible; citing Haraway and Hayles's suggestions that more extreme forms, such as uploading one's mind into a computer, are and will remain impossible (Adorno, 2010, 345). The aesthetics of a medical cyborg, for instance (such as one with an ear implant invisible to

most), are much different than the Hollywood cyborg that most people are familiar with. Adorno claims that this fixation of the body creates a contradiction of wanting to move towards a more powerful body, while accepting that the human body is too limited and frail (ibid, 347). Ultimately, he claims that posthuman ideology is too theoretically vague, and conceptually inconsistent, which lessens its credibility (ibid, 351). That said, Adorno seems to place focus on the trans/posthuman as a monolithic philosophy that has been scattered, but as has been discussed, this is far from the case, being more a collection of theories that was given an umbrella term later on.

1.3.3: Ghost in the Shell – New Materialism and Objects as Subjects

This also brought about what would come to be known as new materialism, a relatively recent offshoot of materialist theory that resonates heavily with many trans/posthumanist thinkers due to its equalising of human and non-human entities, a goal that they are largely compatible with. Bryant's book *The Democracy of Objects* (2011) acts as a good starting point to consider new materialism, as he discusses how since the time of Descartes, we have questioned how much we truly know about the nature of objects (Bryant, 2011, 16). Through establishing that all objects, in one manner or another, contribute to collectives and assemblages, Bryant does not discredit the impact of the human agent, but rather a decentring of the human that instead declares them objects in the vast network of the world (ibid, 20). Alaimo (2012) appears to share this view, discussing the objectivity of science amongst its human masters – and that it truly is subjective, with politics often controlling the direction and practice of science, particularly environmental science (Alaimo, 2012, 560). Through discussion of how the documentary A Shared Fate showcased how mercury and PCBs killed many marine mammals and fish, but chose also to focus on the death of one human due to exposure to those same metals, as well as the existence of human-fuelled climate change, Alaimo notes that nonhuman entities have been removed from a space that 'noone' should be excluded from (ibid, 563). In order to avert this anthropocentric future, she also claims that the desire for a posthuman future is indeed 'sustainable' and of a new materialist persuasion, as those left behind, be they human or otherwise, are not excluded – material will never be 'external, blank, or inert' (ibid).

A very popular new materialist incarnation can be seen in the creation of 'Hatsune Miku', a Japanese pop idol who is entirely fictitious, a voice software and hologram combination developed by Yamaha in a Spanish laboratory - yet performs in massive concert halls worldwide and has many fans – and is the subject of Bell's (2016) research. Considering 'her' a posthuman instrument, Bell discusses that Miku's popularity was foreshadowed by films such as Her (2013), one of many films with sexualised, feminine AI constructs similar to the real Siri and Cortana, but given form and voice (Bell, 2016, 222). Indeed, Bell uses her massive fandom to question what 'real' truly is when it comes to entertainment, and if Miku is any more or less 'real' than the persona of Lady Gaga (ibid, 224) – something which is referenced often in Miku's music videos, where her depiction as a humanoid computer program is made clear, and the music can become 'glitchy' and 'impossible' (ibid, 227). This idea of new materialist posthumanism and the media is explored further by Davies (2016), who notes that this theory is something other than poststructuralist or humanist thinking, and that it makes a 'fresh challenge' to the 'taken-for-granted ascendance' of all things human in research (Davies, 2016, 2), that humans and non-human matter must always interact, all as part of a system. To prove this, Davies refers to the broadcast of Australian cows subject to traditional Halal execution – outrage broke out due to this, as the human viewers felt the cows' suffering as their own (ibid, 12), and helped to shape the anti-Islamic discourse that resulted from the broadcast.

Ultimately, these theories all coalesce back towards what was discussed earlier about the 'anthropocene' (Somerville, 2016; et al) the new historical era suggested by various scientists as the era when natural forces and human forces became intertwined (Somerville, 2016, 1162), and humans and objects alike would cease to be the centre of the world – the merging of which would be the very essence of posthumanity (ibid, 1169). The next section focuses on the mediums through which this research is conducted, namely SF screen and video game media, as well as how they connect to these ideas of trans/posthumanism, in order to give context and framing for the upcoming theoretical framework.

1.4: Video Game Literature: Game Manual

An industry that has done nothing but grow in size and popularity for the last three decades, the video game industry has truly begun to attract a larger academic following than in years past. It has withstood the old moral panics surrounding them, such as violence – though whether this following is enough to call it a truly respected study alongside other media studies is up for debate. Gathered here are some of the key ideas and themes that video game-based literature has collected, and will illuminate why the field is important, and especially so to this thesis.

1.4.1 – **A** New Medium

With video games being the relatively recent medium that it is, especially when compared to television or film, there have been different starting points for those who study it, depending on their academic backgrounds or even individual beliefs regarding the nature of the medium. For instance, Apperley (2006) finds that at the best of times, video games cannot be considered a 'consistent medium' (Apperley, 2006, 6). He explains this through stating that despite their new, interactive medium, video games take more after older forms of games in relying more on 'representational' characteristics than the interactivity that video games are meant to provide (ibid, 8). That said, Apperley admits that this also varies by the genre of video game, which are notably flexible and, despite the feelings of other scholars, heavily dictate what a video game becomes on a mechanical level. Regardless, he concludes that though it is not always found easily, interactivity is what sets this new medium apart from the older narrative forms it adopts and may resemble (ibid, 21). Running parallel to this idea is Berger (2002), who states the very existence of well-defined and varied genres within video games is proof of their development as a worthy art form (Berger, 2002, 5), and their technological advancement gives them potential matching film, television and the other mainstream media forms.

Eskelinen (2001), however, takes a deeper look into how this then-burgeoning new field came to be, and the technicalities that make video games distinct. For instance, he begins by stating that indeed, outside of academic theory, most people easily distinguish between narrative, drama and video games (Eskelinen, 2001, 1) - however, within academia, the practice of studying video games was 'colonised' from the study of literary, theatre, drama and film studies, and as such, Eskelinen considers them 'outdated' and 'limited' in a similar sense to film studies in the 1910s, when there is little understanding and a lot of money on the line. As for his own ideas on the medium, Eskelinen describes video games as 'remediated' games (ibid, 2), combining all the elements of a regular game such as rules, and a transition from beginning to end. However, the differences in the reading of these texts become apparent when in literature, film, or television, a text is treated as a whole – when in video games, things can be picked and chosen, and not everything leads to or constitutes a single narrative – they are far more complex (ibid). In addition, he notes that a 'mere story' is not enough to create a narrative in these games as a result – one must also consider 'events' that allow for agency, as well as the various characters and settings that are given great detail (ibid, 3), concluding that this alone makes video games infinitely different from the purely visual and non-participatory mediums that came before.

1.4.2 – Ludology and Narratology (1) – To Tell a Story

As years of research went by, differences eventually began to appear in the methods and purposes brought to video game research, and the philosophies behind them. There are two distinct ideas here to be explored – the first is 'ludology' – the idea that the gameplay mechanics of games are more important in telling a story and forming a game than the main narrative itself. The second, 'narratology', claims that on the contrary, the narrative and plot of a video game is essential to helping to form a game's mechanics and gameplay style. Below is a small sample of some of the literature that falls on either side of the argument in the dissertation, many of which reveal that in truth, the two sides are closer than they appear.

For those focusing on 'narratology', or at least the importance of narratives in games, Alexander (2011) forms an in-depth discussion on the various types of storytelling in video games, and what they're capable of. First, he reaffirms the common belief of ludologists that video games are 'unsuitable' for narrative study (Alexander, 2011, 91), that only the games and their computing are what truly counts. However, though he accepts that gaming is a new 'realm', a 'liminal state' where much is possible (ibid, 92), he notes that gameplay and narrative do not coexist at all times, though it is possible for them to do so – though more than anything, for a game to convey a story well, 'immersion', through the sound, graphics and other means, must exist to balance out the colourful characters (ibid, 94). In addition to this, Alexander also details the various ways of video game storytelling, such as 'cutscenes', small cinematics that keep the player's feeling of interaction due to their short length (ibid: 95), the text that appears in dialogue boxes, as well as the difference between linear stories in certain genres, and fragmented ones in others (ibid, 113). An interesting argument, Alexander's work here sets the scene perfectly for deeper forays into these ideas of story and gameplay.

An earlier example, Consalvo (2003) takes more of a personal bend on the idea of video game narratives. Opening with the valid point that video games have been understudied in the past, an idea that may still hold true as of this writing (Consalvo, 2003, 322), Consalvo cites the infamous moral panics surrounding violence, video games, and children in the late 1980s, continuing all the way through to the millennium. As such, she decides to research gamers themselves to see what their ideas on narratives are. Through this, Consalvo admits that 'narrative' is a broad term to define, though it is often a 'single coherent story' (ibid, 323), and in games this tends to be about spatial progress or exploration as opposed to a simple story. Indeed, she argues that traditional narratives as in conflict with the basic tenets of gaming, and that balancing gameplay and a non-interactive story can have varying degrees of success (ibid, 324). Gamers, he continues, are very much aware of this, having differing opinions on their quality, and even create their own 'narratives' through walkthroughs and 'FAQs' for games that exist outside their canon.

Jenkins (2004) takes an alternative view, that not all video games do or even can tell stories, and can exist as an abstract, expressive or experimental form (Jenkins, 2004, 119), likely in reference to older games, where the stories were at best very basic and had a lot to convey with very little data. As such, Jenkins believes that games should indeed develop further genres and narrative types (ibid, 120), and work in sync with the gameplay of a given video game, stating that their experience cannot 'simply be

reduced to that of a story'. He continues by expanding on this point, that game designers are far more than storytellers (ibid), as they also create 'worlds' and 'spaces' that writers would be incapable of alone, and indeed, game designers can have many, varied roles. Jenkins cites their creations as 'more memorable' than other narratives, as the worlds can themselves suggest and create other narratives in their own right – such as with the RPG (ibid, 121), a genre where gamers are often encouraged to write their own narrative as they play, also known as 'collaborative storytelling'. As a gamer, this article very much rang true, as for many children of the 1990s; the new allure of video games often succeeded that of books, and even television. As with Jenkins's suggestions, Shapiro (et al, 2006) penned a work where they discuss the great wave of online multiplayer games (Shapiro et al, 2006, 323) which, despite possessing their own, often very large and carefully constructed narratives, are often added to by the very players that frequent them - in great numbers. Firmly on the narratology side of the argument, they discuss how more complex and immersive stories have been shown to increase enjoyment of a video game, and how realism is one key to enhancing the depth of video game narratives to a similar level of other great works of art and media (ibid, 334).

1.4.3 - Ludology and Narratology (2) - Game Design

As for scholars who have taken the other path, and focused primarily on the importance of game mechanics over the narrative of the plot, one who stands out particularly is Ang (2006), who first describes the two types of games; ludus (where to win and to lose is clear), and paidea (where this isn't the case, and is nonlinear). Ang explains that narrative rules are game mechanics necessary in order to complete a game and its plot (Ang, 2006, 310). These include gaining a key in order to open a door, and as such directly involve the story, as opposed to the controls of a game, which (mostly) does not. With 'ludus' games, the rules are either intrinsic or extrinsic – contributing directly to winning a game and indirectly, respectively (ibid, 311), using the example of defeating most enemies in a *Mario* game as extrinsic, but saving the Princess as intrinsic, as it is tied directly to the end of the story. With paidea rules, however, things are less clear, due to its nonlinear nature; symbolic rules consist of what the player can

and cannot do (such as movement), and semantic rules involve the result of action (such as defeating enemies, etc), which are naturally more tied to the narrative (ibid). Ang explains the importance of video game mechanics in how the narrative has to be developed, in order to fit the boundaries of the game. Furthermore, he notes at the end that stories in games are common at the time of writing, and they can be good, but must have solid gameplay to match, and that matches the plot (ibid, 313).

Returning to the more philosophical side of game studies, Frasca (2003) takes it upon himself to explain the original meaning of 'ludology' – the study of games, though this has changed to include video games as well (Frasca, 2003, 1), noting the existence of the Game Studies journal from 2001, where Eskelinen's work above originates. From here, Frasca describes the key facet of video games in his opinion – simulation (ibid, 2). A contrast to representation, he concedes that though it has been a concept for some time, with video games, it is important to understand the game and narrative. To this end, he creates a portmanteau term based on 'simulation' and 'semiotics' - 'simiotics' (ibid, 3), to better encompass the nature of simulation to be 'shaped' and 'altered', while representation in film/TV is fixed and cannot be changed. A term used in my previous dissertation on the topic, simiotics is what Frasca uses to explore the nonbinary win/lose endings that video games have come to possess, as simulation can often offer up all kinds of branched narratives; though within reason, as if the player were to have too much control, the game and narrative could no longer have a consistent 'form', something that the game developer needs to keep for representation's sake (ibid: 10). As can be seen here, regardless of the different philosophies in approach, both of these types of game researcher are intrinsically the same, seeking the links between a narrative and video game. Indeed, Nitsche (2008) makes reference to this fact, stating that few ludologists are actually against the study of narratives in video games – they merely prefer looking at gameplay first, at the boundaries between the two subjects before exploring other topics (Nitsche, 2008: 41).

1.4.4 – Games in Real Life – Applications

Having briefly discussed narratives and the other backgrounds behind game studies, it would be prudent next to discuss the more practical applications of video games, as

they are becoming much more apparent with each passing year – stories of the smash indie hit Minecraft being used in education are common (Nebel et al, 2016), and a personal attendance of a workshop with various scholars from differing backgrounds ranging from physics and mathematics to geology revealed the growing interest of many academic fields of the potential of video games. That said, certain institutions and individuals have been cultivating this interest for some time, such as Baranowski and Buday (2008), who discuss a history of games and psychology interacting (such as with the moral panics with video games and violence), and go so far as to suggest a psychological need for them and of stories in humans – which leads to video games, that are described as being able to increase knowledge capacity and aid in behavioural development, with video games often having positive depictions of human morality. Similarly, Kinder (1993), writing an article based very much in the middle of the infamous moral panics, suggests that the lauded interactivity of video games makes them much more appealing to people, especially children, through a feeling of 'control' or 'mastery' that many people desire (Kinder, 1993: 1). From the narrative angle, Kinder finds that the completion of a game, and reaching the end of the story, leads to gratification, and the desire to repeat said victory leads to cognitive growth (ibid: 111). Indeed, the potential for human growth is apparent here, but that's not all they're capable of.

Continuing the theme of psychology, an article on *Fast Company* has revealed the effect of changing technology on game developers (Segran, 2016) and what they're presented with creating, as the purpose of games has begun to change. Segran notes that there has been increasing difficulties of engaging in 'guesswork' as a game developer, having to create a 'one-size fits all' game design in days past, but now, with facial recognition technology at the forefront of innovation along with other concepts such as virtual reality (VR), there has been a shift in what game design entails. *Nevermind* is an example used of this new technology (ibid), a psychological thriller video game that takes advantage of the emotion-reading technology that has been developed – and responds to the fear levels of its players as the game progresses. Indeed, it seems that players are not the only ones finding new uses for video games, as developers must now consider what a new era of video games could be capable of.

Squire (2002) takes a more classical look at the sinister aspects of video game potential, and how the cultural framing of video games has developed as a result. Here, he notes

that indeed, video games have always been treated with some sort of suspicion (Squire, 2002, n.p.) that continues well past the time of writing and well into today's era. In particular, he pays attention to the Reagan administration's infamous use of video games to train Cold War soldiers ready to deal death on the largest scale then imaginable at the push of a button, and continues by discussing the commonly read fears of violence and health risks that video games can potentially present – while also stating that educational games receive little praise (since then, their quality is considered to have increased). Squire concurs that indeed, while violence and video games has been hotly discussed even by 2002, little attention had been aid to cultural studies on game players themselves, and how they affect people's lives. Here, he cites the capability of 'social practice' being able to extend to historical, political and geographical analysis, as with the Civilisation series of video games, based in the real world. Of course, though a little dated, there is, I argue, a greater call for studying the 'fandom' of video games, as is detailed on the section of fan studies in this very work – it has certainly increased since Squire's writing. Another discussion of the use of video games for specific, political purposes can be found in Mulgan's (2013) work, which details that the majority of economic growth comes from new knowledge and technology, and its application - and video games are no exception (Mulgan, 2013, 145), as it is another form of enhancing life and portraying knowledge. As with Squire's example of the Cold War, Mulgan suggests it can and will be used, in various degrees of subtlety, to portray set ideas and propaganda (ibid: 154). Indeed, this ties in to the next section, where other studies have been known to blend, seamlessly or otherwise, with game studies.

Alternatively, Shildrick (2017) discusses the idea of conventional disability studies crossing over with this era of incoming postmodern biotechnologies (Shildrick, 2017, 137), and has generated what is now known usually as 'critical disability studies' – focused on human corporeality in this era where technology has the capacity to not only 'reorder morphological forms', but also to transform them. While the Cartesian body was seen as the unified, unchanging base of existence in days past (ibid, 138), Shildrick instead discusses that, through the framework of Amanda Baggs' *In My Language* (2007, YouTube), an 8-minute video clip which discusses how autism has people express themselves totally differently to those who are neurotypical, and how Amanda rejects the ways neurotypical people ascribe 'roles' or 'belonging' – viewers are instead

invited to open frameworks to a new kind of 'selfhood' (ibid, 164), and how sometimes, autistic people can be seen as something other, or even less, than human.

1.4.5 - "Are you a boy or a girl"? - Gender and Video Games

One of the most frequent crossovers between academic fields (excluding violence discussions) in my literature search has undoubtedly been between video games and gender studies. A pair of ever-changing fields, their interactions have been wide and varied for almost as long as game studies itself has existed. Beasley and Standley (2002) provide an excellent example, in a study on video games and gender stereotyping that codifies a lot of literature of its era. Here, after noting that video games are becoming as frequent as TV in being household features (Beasley and Standley, 2002, 280), they quickly identify that most video game players are young men, and as such, a large number of masculine messages make it into their narratives. Similar to theories surrounding film and television, they suggest that video games are even more capable of teaching children and young adults various ideas about male and female characters due to their interactivity (ibid, 281). Through a study of various games and the representation of female characters therein, they affirmed that a worrying amount of stereotypes make it into video games concerning women, and that they believe the same is true for male characters (ibid, 290). A relatively simple idea and concept, but one that is telling of the troubling stereotypes that existed in 2002, and still exist today – though awareness of gender issues in video games has been growing in recent years.

Another study in Germany by Hartmann and Klimmt (2006) was based on similar ground, exploring stereotypes of women in games, but this time extending to female gamers as well, and how they fit into the equation (Hartmann and Klimmt, 2006, 1). They explain that publications of that time suggested that girls and young women were playing games more often, in the UK and United States, and has become a bastion for female participation, despite the growing stereotype of the 'gamer girl', depicted often as a clueless gamer (ibid, 2). After surveys asking women about topics such as 'damsels

in distress', sexuality, and violence in video games, Hartmann and Klimmt found that in fact, gender stereotyping was less of an issue to women than the level of social interaction found in games, which suggested acceptance or dismissal of the stereotypes in favour of the facets of the game itself (ibid, 15).

Cross (2013), in a more recent study, decided to take a more in-depth approach to the games themselves in a more philosophical piece. Here, she opened with *World of Warcraft* and the player's ability to play as an avatar with a gender of your choice, which has resonated with the transgender community and those who simply wish to experiment with the idea of playing another gender, be it temporarily or more permanently (Cross, 2013, 74). However, Cross uses the potential for the transgender community from games such as these to imply that video games are another example of this transformation of humans into something more – into the 'transhuman' (ibid: 76), as role-playing games, and advancing technology, can help break down the barriers that gender create. Indeed, moving fully into the transhuman, Cross references the game *Eclipse Phase*, and its narrative of programmable bodies and the escape of death, eventually concluding that 'transhumanity' captures many terms including 'transgender', 'transgressive' and 'transcendent' (ibid, 80).

1.4.6 - Video Games and the Transhuman

Themselves the subjects of many stories and films, video games and transhuman experiences have something of a history, and there are select researchers who have preceded this work in combining the two, along with Cross's work above. One prolific researcher who has touched on these fields combined is Geraci, who has made two separate works discussing them. In the first, Geraci explains that many video game designers create their games according to transhumanist fantasies (Geraci, 2012a, 735), and compares it to the story of *Tlon, Uqbar, Orbus Tertius*, a story in which an imaginary land is written out and begins to shape the real Earth. Citing the immortality that video games simulate, gaining knowledge with each failure, Geraci explains that the virtual worlds that games provide allow humans to transcend biological limits, and internet connections let us maintain instant contact with people otherwise impossibly

far away (ibid, 736). After discussing that many people have taken interest in living in a virtual world if it were to become possible, Geraci moves then to the hundreds of games that possess transhuman themes, such as *Metroid* or *Final Fantasy VII* – similar in theme to the examples that this thesis will provide (ibid, 738), though ones that have not been considered to avoid treading the same ground. Using the title *Deus Ex*, widely known for its transhuman themes, Geraci explains that it does not force transhumanism on the player, giving them a choice that shapes the very game itself (ibid, 742) As well as the story, game mechanics are also discussed, with the concept of 'levelling up' (becoming more powerful in increments) itself a transhuman fantasy in Geraci's eyes.

The other article of Geraci's that I've selected (2012b) focuses more on the role of religious ideas in video games, and Geraci very much supports the idea of transhumanism as a religious phenomenon based on scientific progress and promise. Here, he equates game designers as deities that can construct virtual worlds for people to inhabit with their own virtual bodies (Geraci, 2012b, 101). In addition, case studies including games such as *Mass Effect 2* and *Final Fantasy XIII* showcase his study into negative depictions of religion within video games, showcasing that despite the rise of transhumanism in games, traditional religion is criticised far more heavily (ibid, 102). That said, in the virtual worlds of online games, the semi-joking reverence of moderators as gods (ibid, 103) suggests an existence just slightly beyond human in the power they have over that world, in a different manner from a game developer. Geraci in particular has views and examples that resonate greatly with this work, and has served as an excellent base from which to work off.

Wagner (2014) offers a similar viewpoint of transcendence and religion in video games, this time basing his work from the common idea that religion is 'serious' and games are 'fun' (Wagner, 2014, 193). He believes, however, that both can evoke similar feelings due to their nature of an 'ordered space' – games have virtual worlds, and religion has the promise of 'eternity'. Similar to Geraci's theory on moderators, Wagner provides other archetypes of 'empowered' humans, such as the 'cheater', who transgresses the rules set down by the game, and the 'nihilist', who resigns him/herself completely to the game (ibid, 205). Indeed, O'Gorman (2015) takes another like-minded approach, following the ideas of 'glitches' in video games that allow player characters to transcend the very limits that their already empowered characters might have, entering

another level entirely (O'Gorman, 2015, 71). Furthermore, he discusses 'heroes' and 'martyrs' born of being 'gamers', ranging from those who died of illness to an example of a teenage suicide, the boy who did so wishing to 'truly join the heroes of the game he worshipped' as opposed to staying in the mundane 'real world' (ibid, 87). Indeed, there is influence to be found in these 'virtual worlds', and suggest a transhuman theory both in the narratives and the gameplay of these games.

The influence of video games, then, is clear to see. Stories, games, and the transhuman are all represented here, and the influx of literature on the subject is an example of its relevance, though recent news events and the media's growing obsession with the subject are more than enough proof on their own. There is more to explore with the fandom of video games, though that, has its own place in the video games section on fan culture later in this chapter.

1.5: Sci-Fi Literature: The Final Frontier

This section's purpose is to provide a review of SF scholarship as it currently stands, be the origins of this SF literature, film or television. This prolific genre covers a large variety of sub-genres and ideas, both shared with trans/posthuman philosophies or otherwise, so there is a considerable amount of literature to cover – that said, those chosen are ones which stand out the most as relevant to this thesis as well as the wider genre from which they originate.

1.5.1: Formats - SF as You Like It

First, before moving into separate genres, one must consider the separate 'formats' that these SF works appeared in – not simply what media device they were filmed or shown on, but the 'structure' of the text, such as the popular 'space opera' format popularised by the massive franchise Star Wars – an overarching 'style' that usually predates the set narrative of an SF text. One of the first known formats, and one of the most popular for an extended duration of time was the 'pulp' magazine – so much so that Ashley (2008, 60) considers them the 'driving force in sci-fi', and they had been for the last 80 years – though their heyday was in the 1940s and 50s. She explains that these SF works were heavily shaped by the late Victorian interest in scientific development and the breakthroughs that follow them (ibid), and indeed, works such as those by Wells (The Invisible Man, The Island of Dr. Moreau, etc.), as well as of Jules Verne and many writers in these pulp magazines are proof of this. Indeed, this was the intention of Hugo Gernsback, who was responsible for one of the first examples of these magazines (ibid: 62), Amazing Stories (1926), in fact reprinting stories by Wells, Verne, and others such as Edgar Allen Poe or E.R. Burroughs, creating a strange mixture of content. Exploding in popularity, others quickly rose to the occasion, such as Clayton, who created Astounding Stories (1929), though contention was brought to the table as to whose magazines truly brought 'science' fiction (Ashley, 2008, 63).

As the mediums of television and film came to be in the following decades, it should be prudent to return to the space opera format that would codify popular SF up to the present day — of a journey through a space-bound narrative, while keeping to many rules of a 'human' adventure. Chaffey (2013) takes an interesting look at one of many television series that came about as a result of the genre's popularity, *Farscape* (1999-2003). In this piece, Chaffey describes *Farscape* as a 'tele-odyssey', a subgenre that involves testing the limits of the 'audience' and 'viewer', opting instead that both are far more involved in the show than previous SF works, as *Farscape* very much speaks to the 'human' (Chaffey, 2013, 86), using changes to the body, and technology, very transhuman elements — but framed in such a way that they seem 'everyday', both to the fictional characters within, but also to the viewer that watches them, creating 'televisual consciousness' (ibid), of an SF work that the audience can interact with. Indeed, this theory of closeness with these ideas is something I aim to discover with my own work, and Chaffey also cites works that the writer of this thesis has also viewed as having these properties, despite not using them in the primary research — such as *Babylon 5*

(1994-8), *Battlestar Galactica* (2004-9), and *Stargate SG-1* (1997-2007), all but the latter being 'space operas', and according to Chaffey, all are 'tele-odysseys' (Chaffey, 2013, 87).

In addition to these, Gil names and explores a format he describes as 'dangerous science fiction' and cites *The X-Files* (1993-2002) as a primary source of this dangerous SF. In short, Gil finds that this series can be considered 'dangerous' to the SF status quo due to its challenging of the common concepts of the genre, while still being widely considered a part of it (Gil, 2015, 65) – it relies on exploring aliens and other entities that may be commonplace in the genre, though Gil maintains that *The X-Files* and its showcasing of 'anti-scientific ideas and perspectives' may popularise these views, and result in a wildly different direction than would otherwise be expected of SF - indeed, where the notions of the 'impossible' are dealt with by fantasy series, SF's domain is the 'possible' (ibid, 67), and this would be a source of SF that it may be better to avoid, since a good deal of the SF ideas that this work will explore are grounded either directly in the 'real', or from ideas which evolve from the 'real'. Gil also explores this dichotomy of the 'rational' and 'irrational' in his study of the characters of Mulder, who uses rationalist methods to attempt to prove the wildest theories, and Scully, who always denies these 'impossible' scenarios, even if the evidence is piled against it – the show would often vary on which of the characters was in fact correct (ibid).

However, one particularly interesting format that has appeared was studied recently by York (2016), who cites *Fantastic Voyage* (1966) as a 'fantastic origination story' – namely, that of the 'nanotechnology' world and anything to do with it, both scientific and otherwise, an interplay of the SF work, and how it is used to inspire real nanoscientists. The fiction itself deals with a group of US scientists who seek to miniaturise technologies for use in a human brain to destroy a blood clot in a key Russian defector, in order to stop the Cold War from escalating (York, 2016, 268). A simple film on its own, York goes on to cite how the National Nanotechnology Initiative (NNI), a serious federal research institute, utilise this film as an example – one that despite its fictional origins, allows for the potential uses of the technology to be used for beneficial purposes, and is a film often shown to both faculty and students alike as a result (ibid, 266). This kind of work is something that resonates greatly with this one, as these films, television, and even the video games discussed later in this work, should also have this

'potential'; to at the very least, drive ethical discussions on how these 'transhuman' technologies can be implemented in the real worlds as and when they become available.

1.5.2: Influence - The Men Behind the Monsters

Having explored just a few of the interesting 'formats' that SF can take, there has been a number of texts and articles that delve into the 'influence' behind these works, the greater social, political or personal theories that exist outside of the independent themes and tropes that would come to codify science fiction as it is known today. For instance, Sirabian's work on Wells' *The Invisible Man*, a prototypical example of science-fiction, he theorises that due to the time period, where Britain's trade position was threatened by the rise of advanced German science, and a nationwide fear that science and its teaching would eventually overshadow the study and spread of literature, Wells took to seriously considering science as it was known in the late Victorian era (Sirabian, 2001, 383). In doing so, the character of Griffin, the 'mad scientist', was a personification of the challenge of the natural sciences considering what was 'good' or 'natural' in the contemporary. Indeed, much of literature and media has a tendency to explore what is 'feared' or, at the least, controversial in contemporary society (Campbell and Saren, 2010, 155), being widespread throughout most of the world. Indeed, Firchow (2007) also appears to share this view, suggesting that Wells' *The Time Machine* and the main character's exploration of the Eloi (humanoid descendants of mankind) is representative of the closing years of the British Empire, of the struggles to understand the 'other' during colonisation (Firchow, 2007, 20). In addition to this, Firchow also considers the common trope of the 'utopia', seen within its own genre of fiction as well as SF, and how this reflects Wells' acceptance of the then-new Origin of Species, and its ideas of 'survival of the fittest' (ibid, 28).

Christine Cornea (2011) takes a different approach, this time focusing entirely on the author of their chosen texts – and in this case, it would be the late John Frankenheimer, who Cornea undertakes a largely biographical approach of in exploring his texts. Ultimately, she finds that Frankenheimer's texts resonated largely with his personal struggles of loss, depression, and alcoholism, and his subsequent 'reformation' from these ills, studying three texts produced during this period in his life (Cornea, 2011,

229). In doing this, Cornea crosses his own personal experiences with the disturbing content seen in these films, a combination of the SF and horror genres, as is a common combination – featuring human suffering, and bodies that are 'consistently penetrated, lacerated and reconstituted' (ibid, 231). This is without doubt an important method of study; if not on the whole, certainly as part of a greater study on my chosen texts. Another scholar, Slusser (2014), wrote a similar article on one Gregory Benford, another prolific SF writer, who is described as following a similar path to Asimov in creating 'social science fiction' (Slusser, 2014, 5), that details the impact of scientific and technological advancement on human beings – a similar approach to my own thesis, which also deals with as much the 'personal' as the 'scientific'. Here, Slusser also makes a point of comparing him to other historic scholars such as Descartes or Pascal (ibid, 6), and that Benford hates the concept of 'suspension of disbelief', preferring to expose his readers to scenarios that are entirely possible and scientifically valid, citing scientific sources wherever he goes, in a unique non-academic multidisciplinary approach – which is definitely a powerful idea, and allows for a largescale sharing of ideas, which this researcher also intends to pursue during the fieldwork stage.

Geraci (2011) is a scholar that takes another approach, finding links between the influence of 'religion' onto SF and other popular science projects, with transhumanism being a favoured idea that Geraci also studies. Here, he equates several SF tropes and even real scientific breakthroughs to religious doctrine and other ideas – such as the cyberpunk dystopian futures as prophecy of a utopian 'heaven' (Geraci, 2011, 141), transhumanism and the possibility of powerful AI resembling a religion in its own right (ibid, 142), and SF books as 'authentic fakes' that can be seen a neo-religious texts. The major focus here is on 'immortality', using clones or mind uploading ideas as parallels to the afterlives of various religions (ibid: 145), and the ideas of the 'apocalypse' are very prevalent in science fiction works also resonate with religious mythology. In this case, though this researcher agrees that the spread of transhuman ideas, and the belief in these technologies are vast and hopeful; such is this thesis, yet it does not take the stance of trans/posthuman ideas being a 'religion', due to the researcher's own rationalist bias, and due to the previous section's explanation that a great deal of these ideas are grounded in objective scientific progress.

Similarly, Kaes (2010) also looks at religious imagery, but also in conjunction with the 'noir' genre, SF works that fall into this category of the 'dark city'. In contrast to Geraci's other ideas, this work focuses primarily on the negative 'apocalyptic' imagery, arguing that it has inspired many forms of fiction and art for over two millennia (Kaes, 2010, 17). Specifically, Kaes focuses on Fritz Lang's famous *Metropolis* (1927), which is full of imagery from the Bible's books of Genesis and Revelation, of creation and destruction. In *Metropolis*, no human agency is ever visible (ibid, 18), as the 'machine' does all of this for the humans, that can only react - the machine city's creation is symbolic of a 'Faustian' man using black magic, creating a monster only for himself – and all mankind. However, what sets this apart from Geraci's work is the duality of politics and war, as he argues *Metropolis* also makes reference with 'Moloch' (the name of the city/machine) to World War I, where soldiers were also seen as being fed to 'Moloch', or 'war' (ibid, 20). In addition, he argues that the city also represents American expansion after the war, and the duality of joy and fear in the creation and destruction of cities (ibid, 21). Indeed, a complex analysis, but a fuller one around a single text – the aim here is to minimise the texts that will be used, but to analyse them as thoroughly as was possible here.

1.5.3: Themes - Of SF and the Trans/Posthuman

This third, and perhaps most important section, will be focused on the myriad individual 'themes' that make up SF, many of which have links to transhumanism and the posthuman in their ideas or execution, such as articles about the 'cyborg', or perhaps simply about artificial intelligence. The first of these has Haynes (2014) in a discussion about the stereotypically evil 'mad scientist' trope that often finds its way into these texts. Here, Haynes refers to various fictional 'mad scientists' in SF such as Dr. Jekyll/Mr. Hyde or Dr. Moreau, and other villainous doctors who end up creating or becoming foul and dangerous 'monsters' (Haynes, 2014, 32). Finding that this is due to a common rejection of scientific authority (ibid, 33), Haynes argues that the stereotype could only become more exaggerated as cinema took hold, yet due to better understanding as the 1990s came to pass, the stereotype began to erode, with more rational scientist characters becoming more frequent (ibid, 35). This is certainly

relevant to what this thesis will explore, changing attitudes towards science and technological progress and what kind of ethics drive the ones who use these technologies – and whether people today see the image of the 'mad scientist' or the rational, benevolent one.

Continuing with this theme, Narkunas's work on Margaret Atwood's MaddAddams trilogy, which leads with Oryx and Crake (2003); showcasing the 'logical conclusion' of the mad scientist's warped ambitions - a post-apocalyptic world filled with posthuman beings ('Crakers') following the death of the former human race, barring some individuals immune to a worldwide, genetically engineered pandemic. This work showcases two very interesting points – the first, that Crake, the mad scientist behind the end of the world and the Crakers, denied organised religion and his own 'god complex', yet despite this, his creations revere him as a god in the distant future, showcasing that even he could not remove this enduring aspect of humanity, of faith in the irrational (Narkunas, 2014, 19). As such, Atwood, according to Narkunas, uses this point as leverage for an interesting critique of mainstream transhumanism, stating that with the great power these technologies might provide will likely end up in the hands of the rich elite, who will eventually use this power as the powerful tend to - to subjugate the 'lesser humans' (ibid, 2). Indeed, this is a dimension that will also be tested, the greater ethics behind the philosophy itself, not simply the sciences and technology that its subscribers are willing to employ.

Apart from the previously discussed fear of the return of eugenics and other such morally unstable uses, Abrams (2007) reads into the controversial topic of Nietzsche's *Ubermensch* (Over/Super-man), the man destined to be above all others, alongside the 'Star Child' entity of Stanley Kubrick's famous 2001: A Space Odyssey (1968). This entity appears after the apparent transformation of the main character, David Bowman, upon contact with an alien 'monolith', having survived trials on his way there, similar to the philosophy of the *Úbermensch* (Abrams, 2007, 247). Furthermore, these aliens are in some way hinted to be the precursors, or creators, of mankind, rather than any 'god' – evocative of Nietzsche's nihilist work denying the influence of a god (ibid, 251). In addition to this, Abrams reveals the views of Rey Kurzweil, an AI philosopher, and how they believe that by the year 2045, the 'singularity' would occur - the point at which technology has advanced to the stage that the posthuman has already been achieved (ibid, 248). Ultimately, this work reveals yet another 'end point' of the

trans/posthuman philosophy and its aims, and one that could as easily be abused, as Nietzsche's own views were taken and abused in times past.

1.5.4: Ethics and SF vs. Real Science

Other authors and scholars, however, have taken a closer look at the scientific aspects in SF works, and the exact ethical practices that factor into them – or a lack thereof, in the case of Pheasant-Kelly (2015), who explicitly looks at the dangerous grounds of scientific representation, and ethics in SF cinema – and they state that ethics are 'freed' in these fictional sciences, and thus capitalising on them can be problematic (Pheasant-Kelly, 2015, 28). The reasoning for this is interesting – they state that real scientific misuse, such as the grim Manhattan Project and even Nazi eugenics, are unlike fiction such as Frankenstein, as a fictional scenario, however probably, can be tested again and again without 'real' consequence (ibid, 29). The films that are studied include Prometheus (2012), involving the ethically unsound nature of androids screening the thoughts of humans in cryonic sleep; District 9 (2009), and the segregation of aliens evoking imagery of Apartheid or Nazi camps; and The Hunger Games (2012), and the 'social Darwinist' and the use of bio-weaponry by the rich elite on the surrounding slum districts (ibid, 38). Ultimately, this article showcases a crucial point of SF media – that despite its fictional nature, it can indeed be a dangerous place to test ideas, and is something that will be showcased in the methodology and other sections.

Of course, these ethical quandaries led to controversy and heated discussions in the past, as Hartouni (2008) discusses – leading with a brief discussion on *Gattaca* (1997), a SF world where ethical inhibitions have died out, and posthuman 'perfect' beings have become possible and the destiny of 'mankind' is decided at birth (Hartouni, 2008, 307). However, the interesting points here emerge in Hartouni's exploration of 'science-scepticism' (ibid, 313), of moral panics surrounding the late 1960s and early 1970s, where *in vitro* fertilisation was starting to see wider use, and was feared as something wholly 'unnatural', and would cause the birth of 'unholy monsters' – ideas which spread far and quickly, so much so that a 1969 issue of *Life* magazine speculated that it would destroy traditional family life (ibid). Interestingly, Hartouni reveals that these fears remained largely unchanged as late as 1993, and thus films like *Gattaca* play

on such fears, as is common in cinema – Hartouni ends musing on the state of ethics and laws as these technologies continue to develop. An interesting article, these ideas have helped to form questions that will help when discussing the relations between media and science, and the future thereof.

To complete this ethical discussion, one writer, Zeng (2015), writes on a topic that is useful knowledge for anyone wishing to learn about the field, and are planning to do field research to find what others think, those who are laymen or experts alike. It will also link easily into the next section, on transhuman themes – in this case, on AI ethics, a complex and dangerous subject. Here, he states that both SF and AI have become a massive part of public consciousness in recent years, as well as a growing interest in AI ethics; on the part of individuals, organisations, and even governments of varying scopes – citing the massive company Google as an example, which in 2014 started a dedicated AI ethics board to manage these oncoming problems (Zeng, 2015, 2). Zeng then goes on to list various discussion threads, ones that largely involve 'big' names in the field such as Bill Gates or Stephen Hawking, who theorises that unruly use of AI could go so far as to threaten humanity, and discuss legal, economic and social problems involved (ibid, 3). Interestingly, an idea for five new laws of robotics, echoing Asimov's thoughts on the matter, are updated examples to match the modern age and its worries (ibid, 5).

1.5.5: Cyborgs, Androids and Other Fantastic Technology

Next, then, it should be prudent to explore some articles that have taken to the particulars of these SF/transhuman themes, studying their effects and the reason for their popularity and influence. One of the most popular, in fact, is one that follows on from 'AI' – the 'android'. An artificial, robotic humanoid, Hayles (1999) reads into the use of this posthuman being in Philip K. Dick's *Do Androids Dream of Electric Sheep* (1968) adapted as the film *Blade Runner* (1982), and how these androids exist –being purely artificial humans with an AI base, some of which have gone rogue, leading to the question of what a 'human' truly is, and how different a human or android is (Hayles, 1999, 86). Once again, a biographical study of Philip K. Dick shows that his battles with depression and drug abuse may have influenced this existential bend in his writing

(ibid, 177), showcasing struggles between free will, creativity and 'vitality'. Of course, this shows that what is considered 'human' or 'posthuman' varies greatly from author to author, and even in this very study, it will be important to ask respondents where they might draw the line – if they would consider an advanced AI in a robot body 'human', or other similar lines of questioning. In fact, Hayles also makes reference to *Ubik* (1969), where cryogenically frozen humans showcase psychic abilities and are able to create their own 'worlds' – despite a lack of corporeality, these beings could also be considered 'posthuman' (Hayles, 1999, 23)

Though this work has made reference to this piece earlier, Campbell and Saren's work (2010) studies a range of these beings, going as far back as the ancient myth of the Jewish 'golem' – a clay being, artificially created by man, which is often seen as a subject of 'horror', due to the inherent moral panic of 'tampering with nature' (ibid, 152). This leads through to the present era, where even now, there is a sort of 'technoanxiety' (ibid, 153) which keeps many afraid of technological progress due to similar reasoning, Campbell and Saren theorising that this emerges from the 'primitive', and fear of the unknown – it is here that they claim that 'horror is bound to each era' (ibid, 155), a shared sentiment, and one this researcher believes to be a core tenet of fiction and media, and many other facets of public life – they state that as 'heresy' filled this role in ages past, technology does the same in the modern age, and fiction often involves monstrous perversions of said technology, such as the T-1000 villain of the Terminator film series, a monstrous, skeletal robot (ibid, 162), or the entire concept of 'uncanny' or 'primal' technology – the former seeming completely alien, thus fearful to humans, and the latter being 'dirty' and 'incomplete', such as a cyborg in a 'cyberpunk' dystopian future (ibid, 167).

This uncanny effect is a powerful one, and this is showcased in Spiegel's (2016) article, which reflects on Darko Suvin's concept of 'cognitive estrangement', and how SF intentionally makes things 'strange'. However, Spiegel acknowledges that the original German translation of the word, *Verfremdung*, can translate to all of 'estrangement', 'defamiliarisation', and 'alienation' – all bringing different ideas to the table (ibid, 369). However, Spiegel suggests a common theme, the 'loss of identity', that appears in many works, and this is true of many stories involving AI, cyborgs, or the posthuman in general. In addition, he acknowledges the 'uncanny valley', a common trope that plays on things that appear almost familiar, yet due to their true nature, seem even stranger

for it, citing *The Matrix* (1999) and the 'liquid mirror' special effect as an example of this. Ultimately, Spiegel emphasises that broad terms bring broad meanings, especially in the case of 'estrangement' – however, he notes that the very core of SF is 'change', and interactions between naturalisation, defamiliarisation, and diegetic estrangement – all affect the audience in different ways. Aside from the obvious additions to my thoughts on the methodology, this article was useful for thinking about 'definitions', important especially in this kinda of academic endeavour, as I will need to make the most of the limited words that can be used with any respondents in a given time.

These themes of human emotions and reactions to these new technologies and SF ideas continues with Hyeck (2011), who has found that despite the past representations that made people fearful of authoritarian machines, with another reference to Metropolis appearing (ibid, 234), and human portrayals in SF as focused on 'embodiment', this has changed to machines being 'networked', such as with social networks and devices, and human morals and 'experiences' are more pronounced. Hyeck claims this is due to humanity becoming the 'interface' where the natural and artificial meet (ibid, 231), and SF takes inspiration from this stance – often taking 'daily life' and transforming it, so that despite these otherworldly ideas or posthuman beings, a facet of 'familiarity' can always be found (ibid, 233). Star Wars is used as an example here, of bodily form no longer deciding what is 'human' and what a 'machine' is; with the mechanical R2-D2 being very 'human' in its mannerisms, and Darth Vader (initially) being presented as having lost his humanity and identity to become a true 'machine' for the Emperor, who feigns emotion and manipulates it as if he were hardly human himself (ibid, 242). Ultimately, this article showcases the interesting perspectives between what is 'human' or 'familiar', and plays into this thesis, of people becoming more comfortable with these advanced ideas, whether they work directly with this form of technology or not – many will have been exposed to these texts, and thus, these 'ideas'.

Therefore, we have texts before us which showcase the 'horror' and 'strangeness' that SF brings, and the 'familiarity' that it can also convey. However, Ornella (2010) reveals another side of these ideas, of the body and sexuality, amongst the most intimate of human expressions. Opening with the very real idea of plastic surgery and the ability to alter our bodies in drastic physical ways already, and the fact that ICTs give us more connections than a single body could ever allow, we are already 'more than human' (ibid, 312). However, Ornella also finds that both surgery and ICTs can be and are

already used for heightening sexual experiences, and thus the relations between body, sexuality, and technology is very tightly knit. As well as citing films such as *eXistenZ* (1999) in which the erotic possibilities of futuristic technology is shown without displaying sex itself, Ornella states that the adult entertainment industry has always been at the forefront of developing new technologies in order to sell their products, with growing success (Ornella, 2010, 318), and speculates whether the future of sexuality will be free or 'sterile and controlled', depending on how these technologies, and attitudes on sexuality, develop. Though not necessarily an angle that will be used here, this remains an important and relevant topic to study, as this basic human desire is something that will likely always remain relevant, even as the 'future' takes hold.

1.5.6: The Transhuman Future, Race, and the 'Other'

Finally, though there are many themes to explore with SF and the transhuman, it is undoubtedly important to remember the 'familiarity' aspect that was just discussed, as this relevancy to life extends to the more sensitive subjects as well, as Bould (2007) explores with 'Black SF'. Here, he explores the common SF trope of the 'colour-blind' future, of all races coming together as one in the space-faring future, and criticises it heavily – some films even making fun of this trope, due to it simply being unlikely, as well as potentially harmful, citing it as an ingrained form of racism that, despite being good-natured, avoids the identity of the 'other' and remains distant, dissociating them with their struggles and having the privileged remain blissfully ignorant (ibid, 180). Indeed, his study reveals a common worry about SF and transhuman theory, that it will remain in the hands of 'rich, white guys' who can shape the future, while leaving the 'other' and the 'poor' to remain in the ruins they leave behind. Indeed, this is an important factor that must be discussed, and will certainly appear in the methodology, alongside gender and sexuality discussions in relation to SF and the trans/posthuman, as 'representation' requires that all people be 'visible'.

In a similar, though historic vein, Grewell (2001) explores the unfortunate implications that many space-faring SF series either avoid altogether or portray poorly –

colonisation. A dark and bloody topic in Earth history alone, Grewell opens with theorising that if an advanced alien race appeared before Earth, would they massacre or 'let alone' the natives, much as the American settlers did to the natives in North America? (ibid, 25). As SF has been established to take much from everyday life, Grewell also notes that it takes heavily from our past as well, with colonisation appearing in many SF works, and its effects are often less than favourably portrayed – such as in *Star Wars*. In this, the Gungan race, an alien race living on the planet of Naboo, live underwater, whereas the rich and powerful humans live aboveground, in lush buildings and palaces, while having stereotypical 'other' accents (ibid: 36). Therefore, Grewell studies this and other ideas such as the concept of 'Martians' as humans born on Mars, and thus are exposed to different atmospheres and environments, and thus colonisation, and its dual effects, may continue into the future, regardless of whether intelligent life outside Earth truly exists or not (ibid, 39).

Pordzik (2012), however, takes this theory one step further and considers what might become of the 'other' in the future, or even where they are in the present. Discussing what it means to be 'human' or 'posthuman', Pordzik takes a more 'current' stance on the posthuman, that the techno-culture that we in the west live in today makes us posthuman compared to those who are disconnected, in the third-world for instance (ibid, 143) – that we are supremely privileged over them. Citing *The Time Machine* and *Oryx and Crake*, he notes that a dystopian, imperfect world is evocative of the extremes of this system, of the underprivileged being swept aside, and the latter is representative of humanity being removed, through genocide, of its privileged position when it comes to 'engineering evolution' as some transhumanists speculate is possible. This work, then, brings yet another perspective of these ideas of the 'posthuman', and what is morally correct when making choices relating to it.

Gwyneth Jones (2012) has a similarly pessimistic view of these sci-fi ideas in relation to our already shaky history of earthbound race relations, as she describes the 'pirates of the universe' (Jones, 2012, 1) – the use of SF to project our own 'technophilia', that of the social and political ideation of the west, into 'other times' and 'other realms' – suggesting that in fact, academic study misses the 'puppet theatre's true nature, that of finding and colonising 'new worlds', being an extension of imperialism. Jones does note, however, that despite the conservative view of SF on 'home politics', the attitudes towards these fictional colonies are 'surprisingly liberal' (ibid, 3); with the story usually

siding with the exploited natives (such as in James Cameron's *Avatar*, etc.), being used as a vehicle of protest against the military and cultural imperialism of the White North – that said, with class issues not discussed, and the overall prevalence of white authors being the only ones to imagine a 'future', Jones doesn't believe that SF has truly completed its 'journey south' (ibid, 9).

This idea of problematic race theory around posthumanism continues with Christin Ellis, who discusses, through using antebellum antislavery materialism and Frederick Douglass as a framing device, just how much is missing from posthuman discourse. For instance, the 1850s are discussed as seeing the rice of racial science and the consolidation of modern biological racism (Ellis, 2018, 135), and race is described as the founding proposition around which their antislavery materialisms gather. Indeed, Ellis states that a growing number of critics, in addition to those above, have noticed this absence of race, and consider it a failure (ibid, 136), as racism has always been interested in defining what is 'human' or 'nonhuman', the 'other' – posthumanism exists as a flat ontology; that is to say, it makes the case for the ethnical and political standings of 'nonhuman beings', human or otherwise. As such, Ellis describes posthumanists as quick to stand up for non-Homo Sapiens who are declared non-human but may fail to grasp that this can also include some Homo Sapiens as well (ibid, 137).

As an alternative, Ellis instead suggests the work of black feminist theorist Sylvia Wynter (ibid, 138), whose work resonates with the posthumanism, as she believes that overcoming racism is not simply a matter of redeeming liberal humanism, but rather inventing 'new genres of the human' – ones that look beyond Western humanism's episteme of 'man' – instead framing social justice an explicitly posthumanist project. Ultimately, Ellis finds this to conclude that the human is in fact an 'ideology masquerading as a species' (ibid, 144), and that posthumanism can be seen as a form of anti-racism that does not consistently recognise itself as such, being instead more focused on what is outwardly non-human.

As can be seen, there is a great host of literature available, as I have only scratched the surface as to what's really out there, but it has given me an idea on what to include, the issues and topics to discuss when undergoing my own research, be it looking at the narratives of the SF I study, or the questions I ask people in relation to said texts. The

next section will detail some of the common methodology employed by these scholars, the usual practices when dealing directly with SF texts and authors.

1.6: Fan Studies Literature: Global Fandom

1.6.1: Of Fan Studies and the 'Aca-fan'

Beginning with a general introduction to academia and its relation and initial theory with 'fan/geek studies', the starting point that one should consider when researching this theory lies in Cristofari and Guitton's work (2016) considering the position of fans and academics when interacting with one another; or particularly, the difficulties that arise when many scholars, including the author of this very thesis, study fan communities while also being part of similar communities themselves (Cristofari and Guitton, 2016, 2). Differing in involvement, this spectrum of people, ranging from 'professional' to 'amateur' when it comes to both academia, fandom, or both - were given the portmanteau name of 'aca-fan' (ibid). Attempting to distinguish this new term from the 'participant observer', Cristofari and Guitton discuss that the methods involved are quite different, and that choosing which fandom to study can be difficult, as they are vast – while being on the lookout for difficulties and ethical problems (ibid, 11) such as 'cultural appropriation' in the sense of gaining heightened access to behindthe-scenes content or interviews that regular fans would not have access to, and considering the ethical position of a 'fellow fan' taking from what may be their beloved communities without always giving something back in return. An interesting piece, it certainly influenced how this work would develop, as considering the balance between the professional and the casual is more important than ever in this kind of research.

Other studies detail the history of how these studies came to be to begin with. For instance, McArthur (2009) reveals that it was the older studies of youth subcultures involving popular music and youth movements that laid the groundwork for these studies (McArthur, 2009, 58), while also going into the origin of the term 'geek' which is often used in these studies (ibid, 61), existing as both an insult and a moniker of pride

concerning the 'intelligence' and later, 'coolness' found in these societies of outcast youths. Through performing interviews in various internet forums, McArthur concludes that the internet remains and is likely to remain a bastion for these 'geeks', being a strong resource and medium (ibid, 69) that has served to shift their representation, at least partially, from insulting to prideful. This idea is reflected in McCain, Gentile and Campbell's psychological evaluation of 'geek culture' (2015), where former social outcasts (McCain, Gentile and Campbell, 2015, 2) have developed their own subculture through their specialist knowledge, determination and devotion. That said, this shift in 'geek pride' seems to have resulted from a 'great fantasy migration', where a sense of inflated self-esteem and narcissism in US society creates a strong 'ego', and a desire to 'belong' (ibid, 4), as a result of abuse and low self-esteem from being a 'geek'. Insightful, these scholars conclude that these ideas are why these 'geeks' and fans engage with media, and the fact that 'role playing' and other forms of fan content fall in line with transhumanist fantasies is a certain point of interest for this thesis.

1.6.2: Fandom (1) - Japan's Cultural Exports

Next, there is a massive assortment of literature that details the study of specific fan cultures, and there are two specific types chosen here, due to their diversity, as well as their capacity for the creation of fan content and the 'role playing' aspect mentioned above. The first is the Japanese media fandom (includes anime, manga, etc.), which has been growing in popularity spectacularly for the last two decades, and the literature available certainly reflects this. One of these, headed by Chandler-Olcott and Mahar (2003), explores the fan culture that was and remains very popular with adolescents and is often anime-inspired, 'fanfiction'. Described as a 'raiding' of mass culture (Chandler-Olcott and Mahar, 2003, 556), fanfiction involves fans using existing media texts as a starting point for their own writing and is presented as a direct result of Japan's 'chief cultural export', or manga/anime, to the west. Through interviews with fanfiction writers (ibid, 557), they find fanfiction to be a powerful gateway for teenagers to explore complex themes such as sexuality, and very much operate similarly to the creation of more formally established fiction. Ultimately, they find that young people that write these works seem to be more likely to be 'good students', though they don't

mix their academic life with their 'secret' lives – the scholars believe that learning to tap more into the creative side of children may allow more insight into the learning process (ibid, 557). Fukunaga (2006) also taps into the anime/manga fan culture and its impact on education in a piece that discovers that, in recent years, this fandom has managed to change the shape and scope of an entire field of education – namely, Japanese language. Indeed, Fukunaga points out that though once learning Japanese was about 'resumes and business applications' (Fukunaga, 2006, 206), it has now changed to allowing fans to further integrate with the media they're passionate about. Through interviews in 2003 with three anime fans, Fukunaga finds that this has allowed these fans to 'shape-shift' their portfolios, using computer skills and internet access to make possible ideas that would not have been heard of in the field before – an experience with added value that fuses fandom studies and education studies.

Well aware of fan culture's low status in arts and humanities education and research, and sporting a great desire to showcase the diversity of genre and dynamics therein, Chen (2012) also creates an account of the importance of Japanese media fandom through its effect on Taiwanese fan culture – specifically, that of the 'cosplay' community – of dressing as; and acting out the roles of characters from these media works, and the 'doujinshi' community – essentially, institutionalised fanfiction, due to differing copyright laws in Japan (Chen, 2012, 14). As with the western world, Chen notes that the spread of Japanese media and fandom also occurred in eastern countries such as Taiwan, Korea, and China, and has lead to an explosion of creativity. In order to discover how this became so popular, Chen visits Taiwanese fan gatherings (ibid, 16) and performs interviews of fans aged 16 and above. By the end, Chen discovers that the main reasons the fandom exists is due to a mixture of 'fulfilment', imagination and fantasy, and developing talent – indeed, he notes that these fans tend to be active cultural agents that produce as they consume (ibid, 21), while fulfilling their fantasies. In a similar study, Lam (2010) takes to Japan's 'Komike', a biannual comic market in Tokyo, in order to explore the history and culture surrounding the doujinshi phenomenon. Interestingly, Lam discovers that before the late 1990s, Japan's otherwise incredibly popular fan culture was shaken forever with the infamous murderer Miyazaki Tsutomu (Lam, 2010, 239), who was identified as a 'geek' (or 'otaku', as an equivalent Japanese term), having murdered four schoolgirls in July 1989 and caused a stereotype to be born of the 'creepy otaku', which hasn't necessarily healed even with the resurgence in anime fandom in Japan that hasn't ceased since.

Returning to the western world, the specific histories of Japanese media fandom are explored by various scholars, Leonard (2005) giving an in-depth account starting from the very base level, the content creators such as 'fan-subbers', people who would translate and copy in subtitles to early VHS copies of anime (Leonard, 2005, 282), who would help kick off this burgeoning, 90s fandom that would come to explode in the coming years, with the help of the C/FO (Cartoon/Fantasy Organization), which reportedly was the first use of the term 'anime' in the west, and received episodes as early as 1979. Leonard largely believes that the 'cultural sink' that animation had become in America, which led animation to, in the eyes of the masses, be a medium solely for children (ibid, 283). However, with the rise of western channels picking up dubbed anime and various gatherings and conventions, the Japanese market began at last to see profit in selling their wares to the west (ibid, 300). Alternatively, Winge (2006) frames the history of the western fandom through the eyes of the western 'otaku', as the term was appropriated by western fans sometime after it came into being. Exploring the history of cosplay, Winge traces it back to 1980s conventions and early web sites, but nothing more specific than this – the exact origins are difficult to trace (Winge, 2006, 66). Regardless, the article praises the large social atmosphere and diversity of people the practice attracts, often regardless of the portrayed ethnicity or gender of the character of origin, either for the sake of humour or subversion – one major idea being 'crossplay', a term used to describe the cosplay of a character of a gender not one's own, which again can be used merely for humour, but is also suggested to have the alternate meanings of gender subversion and experimentation (ibid, 71).

1.6.3: Fandom (2) - Games and Gamers

Next, largely primarily emerging from Japan, yet having since gained powerful markets in America and Europe as well, video gaming has also developed a massive fandom since its days of the arcades, and eventually PC, home consoles and handhelds, with millions of players across the globe – so it should come as no surprise that articles

concerning its various fan circles have appeared alongside other fandoms, and due to the level of interaction that video games provide, they have their own unique dynamic that blurs the creator and the fan, perhaps even more than any other. Geraci is but one scholar that picks up on this phenomenon, likening game designers as having 'god-like' abilities for the players they cater for – the same applies for moderators in online games, who are often seen, either mockingly or otherwise as 'gods' of the game by players (Geraci, 2012b, 103), creating an interactivity that the developers had perhaps not even intended.

A similar situation emerged with the rise of video game 'hacking' and 'modding', which largely started off as unauthorised alteration of a game's code in order to create entirely new experiences, but has since become officially sanctioned by many games and companies, though the original form still exists in earnest. Postigo (2008) describes this as 'convergence', a theory that once described the control of mass media by a few select corporations, but has shifted in the last 30 years to mean the merging media formats of text, video and many more into digital networks (Postigo, 2008, 60). Indeed, he also describes the 'porous' relationship between consumer and producer in the video game markets, referencing the mods made for DOOM and Wolfenstein 3D, games that originated in the 1990s. Indeed, though a touchy legal subject, Postigo does note that companies can gain as much as they lose from modding, and they have taken notice of this, as he interviews game developers that actively encourage the modding of their games, despite legal barriers stating otherwise (ibid, 61). Ultimately, this leads to the conclusion that the term 'fan' is far different than it used to be, and indeed, this dynamic is likely to be subject to change as creators become more open in similar ways, such as on social media. Though a more unstable variation, video game glitches have also long been a fan favourite to play with and exploit, as O'Gorman (2015) details, noting that through finding and exploiting glitches, a player can become famous within their social circles (O'Gorman, 2015, 71), or even throughout the entire relevant fandom, becoming 'gods' similar to prolific moderators or other figures famous in their communities. Sotamaa (2010) takes a closer look at one of many 'modding communities' that have emerged from this culture, specifically one for the game Operation Flashpoint (OFP) (Sotamaa, 2010, 241). Here, mods are given a far broader exploration, ranging from 'simple art pieces' purely for aesthetics to ones that change the game entirely in various ways (ibid, 244), and the people that create them more

depth than mere 'modders' – with differing ethnic backgrounds that have caused language barriers and other tensions, yet often work together regardless to expand their communities (ibid, 248) – a way of bringing people together through user-generated content.

This idea of 'user generated' content and the blurring between the lines of producer and consumer has also been a large focus of fan culture studies, of which modding is only one facet – and this theory is central to the development of this thesis. Humphreys (2005), for instance, studied the game mechanics and people who together made up the online game experience of Everquest. And indeed, it was not erroneous to cite the people who play it as part of the text's experience, as Humphreys explains that the 'multi-directional feedback loops' that draw on the players' inputs, require participation, and give rewards and feedback for said input (Humphreys, 2005, 38). As such, this means that no two times the game is played are the same, and this openness resonates highly with fans of these very 'social' games and virtual worlds. In addition, Humphreys notes the 'fan fictions' that spring up around these often narrative-loose or flexible games (ibid, 40), and discusses the intellectual rights of 'modders' and 'content creators' that interact with official software created by other developers such as Everquest, and sometimes even profit from it – fan interactions such as these are integral to the case studies of this work. Video games are not the only media with such widespread, online interactions, however – Pearson (2010) looks into the recent history of television and film in the digital age, and finds unique fan interactions there as well – such as the piracy of Battlestar Galactica before its US release in 2004, and how its popularity led to the piracy actually helping ratings when the official airing finally arrived, due to the building of hype around the show (Pearson, 2010, 84). This is used as an allegory to pre-digital practices that also helped shows in symbiotic relationships between fans and show-runners, such as the famous 'Trekkies' of Star Trek fame, who kept their fandom alive through fan clubs and fan films through 'drought' periods in the show's history (ibid, 87).

As for the evolution of video game fandom itself, Shaw (2010) concedes that for a while before academia truly began to pick up on it, 'game culture' was very much defined via the gamers themselves, a true 'fan culture' (Shaw, 2010, 405) – however, his focus is not to outline the gamers themselves, but rather try and form a harder definition. In doing this, Shaw describes an 'experiential gap' between those familiar

with games and those who have only had 'second-hand' experiences with them (ibid, 406), noting that most articles have filled this gap by using the 'gamer's side of the story', rarely looking at the 'second-hand' accounts and what they say about gaming culture. Through looking at various accounts, Shaw eventually concludes that there are a massive amount of perspectives around this culture (ibid, 416), including those that involve education, mobile technology, family interactions, and other ideas that literature about gaming culture doesn't necessarily cover. Indeed, as transhuman perspectives are just one more to add to the list, this article is very relevant as a result.

That said, a more traditional account can be found in Kowert, Griffiths and Oldmeadow's work (2012), which follows the ever evolving culture that online gamers inhabit – a largely social endeavour in truth, they find that the young, male stereotype of the lazy and lonely gamer is still in full force, but as with the Japanese 'otaku', they note that these people are, through sheer numbers alone, becoming more meaningful, and hence the 'social' stereotype has become a 'cognitive' one. That said, referencing popular TV programmes such as South Park, The Big Bang Theory and Law and Order: SVU (Kowert et al, 2012, 472), they find that this stereotype is far from defeated, and the news agencies also further this agenda, focusing primarily on their addictive nature and their history of interaction with mental illness (ibid, 473), largely looking at the MMORPG (Massively Multiplayer Online Role Playing Game) genre, from which myriad moral panics have emerged. Whether the stereotype is well founded or not, their interesting findings through online surveys of gamers and non-gamers, most of which were male, consisted of the widely held belief that indeed, the stereotype that plagues them is at least partially valid, showcasing the power that the media has on these fan cultures (ibid, 475).

1.6.4: Online Communities and Dynamic Fans

Following from the online gamer discussion, there is a lot to be said about online fandom, communities and the opportunities this presents for fans to participate, create, and share, especially with the current level of development the internet has in the modern world. Naturally, this has not gone unnoticed, and various scholars have tried their hand at tackling these recent spaces. For instance, Dunlap and Wolf (2010) explore the old, controversial website known as 'Fandom Wank', a website dedicated to 'pointing out and laughing at' what is perceived as undue or futile drama created in fandom and other online communities (Dunlap and Wolf, 2010, 267). With over 5000 members as of the time of writing, the site is known for its coarse language and the controversial nature of their humour that often comes with their criticism, valid or otherwise. In a quest to discover whether some of the discussions taking place in this website are 'intellectually' motivated, they discuss a familiar issue in debating where the place of the researcher in fandom is, mirroring the 'aca-fan' debate (ibid, 272). While concluding that indeed, some of their criticism is valid amongst the noise, Dunlap and Wolf emphasise that the point of their research is that there is no 'invalid' place of study for academia, and that academics cannot 'cherry-pick' based on the ideological structures that institutions create (ibid, 281), so that even a website as controversial as this can be a valuable source for researchers.

In a similar vein to their study, Massanari (2015) tackles the recent and extremely controversial topics of GamerGate, a debate about the integrity of games journalism that transformed into a multitude of different discussions, and what would come to be known as 'The Fappening', an event where various nude images of celebrities were leaked onto the internet for all to see. In both cases, Massanari finds that the structure of websites that allow fan discussion, such as Reddit (which is moderated by otherwise common users) has allowed for toxic environments to develop in these communities (Massanari, 2015, 2). Indeed, due to their self-moderation, Reddit communities such as those involved in this controversy can quickly become one-sided and harmful, as evidenced by the 'r/tumblrinaction' subreddit, where users commonly express harmful views using the website Tumblr as a proxy (ibid, 7). A showcase in the darker side of fandom, Massanari explains that despite the fandom's perceived actions as noble on the whole, many people take advantage of this open culture to their own ends.

Similar to the creation aspect of cosplay or other ideas, Martens (2011) explores 'transmedia' theory – or the use of multiple media platforms in order to aid the creation of content. Through interviews with various women and young girls, and using the *Twilight* series as a medium, she discovers that the explosion of fan works and other 'user-generated' content is a distinct contrast from fandom of the 1990s, where there

was little room for 'new, controversial ideas' and 'challenging voices'. Ultimately, she concludes that after over 40 years of young adult literature, participation has evolved from mere small-time programs to larger discourse between fans and publishers (Martens, 2011, 65) Using a different medium, Russo (2009) explores the then-recent, but still burgeoning YouTube community, and how its structure has changed video sharing forever, while allowing for a new medium and generation of fan-created content (Russo, 2009, 125). With fan videos, music videos and other created content of dubious legal standing, Russo states that once content exists on the web, it is very difficult for even the law to take it down, if not outright impossible. With its growing charm, Russo makes the very valid point that soon, television and computers will soon serve very much the same function, due to the change in boundaries and abilities that it implies, showcasing the extraordinary power and influence that fandom has gained (ibid, 120).

1.6.5: Conventions and Fan Societies

As research into these fan communities developed, researchers would eventually turn to places where there is a great amount of access to large volumes of people from these communities, and in doing so, some have found perhaps the largest culture base of all – Comic-Con, or the ever-growing practice of the mass-gathering of fans and media producers alike for all to enjoy – indeed, this section is especially important, as it lays the groundwork for much of the methodology involving these conventions. One of the originals, San Diego Comic-Con, is explored by Jenkins (2011), and though reporters and media outlets go for news about new media and celebrities, they never explore the other realms to the convention, which he describes as a meeting point between 'transmedia commercial culture' and a 'grassroots participatory culture' (Jenkins, 2011, 23). Indeed, a massive venue, San Diego Comic-Con attracted over 140,000 people in its 2011 event, over a period of five days – and is a clear sign of consumer culture, with commercial signs and goods as far as the eye can see, emphasising fans as consumers rather than producers (ibid, 25). These askew priorities extend to celebrity and developer panels, to which reporters on their day job may be apathetic towards, but many 'true fans' are locked outside as the room fills quickly (ibid, 26). However, despite the negatives, Jenkins did find that participatory culture is alive and well in

Comic-Con – he found that it acts as a sort of 'jury' for prospective TV shows and films (ibid: 27), as the fans have great sway into whether these shows 'take off' and become popular.

Another scholar visiting the San Diego Comic-Con, Smith (2010) takes an approach largely based in comics studies, believing that it makes a good platform for launching it as an accepted academic field (Smith, 2012, 88). To do this, he also explores the mixture of fandom and corporate activity at Comic-Con, with the idea that 'comics being the research and development wing of Hollywood' has become something of a catchphrase, and true to form, these media giants have been seen both here and in Jenkins' work to be paying very close attention to what happens at these conventions (ibid, 89). Interestingly, Smith also notes that academic conferences and other 'incognito scholars' also appear in these conventions occasionally, which makes it all the more ironic that there are no academic seats for his desired studies (ibid, 90) – though he concedes that they are not always as useful as mainstream conferences.

Taking a more specialised approach, an old study by Jindra (1994) reveals the almost religious lengths that the infamous Star Trek fandom can reach, and Jindra does this by exploring a convention based solely around the series as it existed 25 years after the original run began (Jindra, 1994, 27), guaranteeing at least a significant fanbase. In this convention, Jindra explores the fandom in depth, with expanded universe materials separate from the main shows, a journal dedicated to the study of Klingon, a complete fictional language, and much more – through discussions with fans, and scouring online message boards that received more than 1000 messages a week (impressive by 1994's standards), Jindra eventually concludes that indeed, Star Trek and its conventions somewhat emulate a religious affair, but it is at the very least more than entertainment, showing that even more than two decades ago, this participatory culture was incredibly strong, and would only continue to spread. With all of this, it is clear to see that there is an incredible power behind fan culture, particularly with the advent of the internet, which gives many people voices and abilities they would not have had otherwise, and can shape the form of media discourse itself, amongst other things. As such, research involving fans is be very relevant to this thesis.

The next section serves as the explanation of the theoretical framework for this thesis, the ways in which the media and the fans can explore and bring out these themes, in ways that I believe are key to framing the sheer popularity of these trans/posthuman ideas – in the forms of the 'body', 'identity', and 'power'.

1.7: Theoretical Framework: Body, Identity, Power

1.7.1: The Changing Body

The most basic of themes that interest the trans/posthuman is at its heart – the body; and how much we are able to change or even escape it. In the publication The Transhumanist FAQ: A General Introduction (Bostrom et al, 2003), Transhumanism is described as a 'way of thinking' based on the premise that we humans, as a species, are capable of evolution at our own hands, for the sake of the improvement of knowledge, aspirations and ideals, and that the human 'form' as we know it is not important, that it merely need to be shaped and moulded towards reaching these ends (ibid: 4). Naturally, this can mean all manner of augmentations and changes, but the most common worry is that of losing 'humanity', which the FAQ also addresses; it states that though the aim is to reach what is known as the 'Posthuman', the state of being 'beyond human' (Hayles, 1999, 3). That said, it does not imply that humans no longer exist (Bostrom et al, 2003, 5), or will be the subject of racism or other prejudices, though this of course is possible due to the historically proven nature of humanity (ibid, 33), as well as the potential abuse of these new modifications or technologies by madmen or other ill-intentioned people (ibid, 22). Indeed, there are some that note that this line of thinking, of faith in constant progress, very much resembles a religion without a deity, due to it being based on little initial empirical evidence (Geraci, 2011, 142). However, one unique view that has appeared in these studies is one which Max More details, that of Paul Kurtz's 'euphraxsophy', a nonreligious 'philosophy of life that rejects faith, worship and the supernatural', instead focusing on what is 'meaningful and ethical', based on scientific theory and progress (More, 2013, 4). This has led to ideas such as 'extropy', principles that are benevolent towards life and support Transhumanism (ibid, 5), as well as the concept of the 'extropia', a society thriving on constant improvement, as opposed to a static 'utopia' (More: 6).

Starting with 'ontology and transcendence', this is a relatively simple idea, but one that is the base for most 'transhuman and posthuman' thought - the removal of physical form of the human self, or perhaps just elevating to a 'posthuman' physical form, and becoming like a 'god' amongst men – something that has been compared to Nietzsche's 'Übermensch' theory, of the 'superman' that is destined to rule over other men (Graham, 2002). This raises many implications, and the first is that religions have been found to openly oppose this idea (Bainbridge, 2005), and religious people are more likely to reject transhuman ideas, particularly those around 'transcendence'. This is perhaps due to the fact that these ideas resemble a religion in their own right, a religion of science (Bishop, 2010; Graham, 2002, et al.). Otherwise, some transhumanists believe in this as a 'rapid evolution' theory, which allows transcendence without removing the physical form (Bishop, 2010, 702). Reference has been made to the rapid development of technology in the last half-century, and how this has helped these ideas develop (Graham, 2002), and they are compatible with theory that has existed for far longer.

Soon, cyborg theory came along, attracting theorists such as Donna Haraway', exploring this sensational idea of a mixture of machine and man, something that could transcend common boundaries such as gender, something truly 'posthuman' (Haraway, 1987) As this research continued, there were various points and ideas that kept making themselves known, alongside the current and often reported developments of mechanical prostheses as well as pacemakers. The first example of this is the use of existing technology already as an extension of the 'self' and 'body'; through new media and the internet, and the phones, laptops and other mobile devices that utilise them, ensuring that we are constantly connected to the rest of the world through this technology (Vicini & Brazal, 2015, et al.). However, attention has been paid to parts of the world that do not share this privilege, with academics worried that the digital divide may become more extreme as this technology grows and the less fortunate continue to be denied them – creating a potential for further domination of the first world over said countries (Clark, 2004, 167). In addition, the potential for 'cyborgs' of both metaphysical and literal senses to create tyranny and continue toxic discourses such as sexism and racism has been addressed, with the possibility of 'new racism' of augmented vs. non-augmented people being just one of these problematic scenarios (Vicini & Brazal, 2015, 152).

Haraway's theory also lays the groundwork for another theoretical standpoint, of Cyberfeminism – Gillis (2004) describes Haraway's work as a prototype of sorts for this young theory, as an evolutionary move away from the overarching patriarchal hegemony, which leaves these new, 'cyborg' women as the 'other' in society. This theory finds its roots in the 1990s, with Everett (2004) finding that despite men dominating the tech sector along with many other categories, women in fact started to increase their online usage, and were able to take to the internet in order to find a new platform for feminist thinking. However, Everett also notes that indeed, this does not stop toxic rhetoric such as sexist, racism and homophobia from dominating internet spaces. In addition, Gajjala (2014) finds that the field itself may need some careful monitoring, as what it means to be 'born digital' is always vague, with the difference between white and subaltern women and technology noted; western, urban women form networks of power, and the subaltern woman is in turn empowered by the selfempowered western women, and seeks to strengthen herself – all positive change, but with different backgrounds and evolution. Schlesselman-Tarango (2014) also notes that the cyborg woman has a 'commitment to diversity', and that it must remain committed to critical thinking and diversity, rejecting the idea of an 'Edenic return', of an idea of shared origins that rejects the acceptance of diversity.

Furthermore, Gillis notes that Cyberfeminism is often monolithically defined, and this is incorrect – it is not perfect, as it does exclude men and obscure the potential for explorations of gender and technology as a whole, it has the potential to become its own field, as opposed to one that only 'reifies' the other forms of feminism (Gillis, 2004, 193). In another interpretation, Minahan and Cox (2007) explore the 'Stitch'n'Bitch' phenomenon, with women coming together in arts and crafts groups via the internet to discuss all manner of things, as a potential reclaiming of men's spaces and technology and Cyberfeminism, or perhaps a criticism of the gender divide that alienates some women from the tech sector – reminiscent of the hippie movements of the 60s.

Although there is little literature relating sexuality and transgender studies in relation to transhumanism to be found, there are still some points to explore. The obvious common ground here is that when choosing gender, one is choosing a desired 'form', which is a central tenet that most transhumanists share – the right to be what we desire (Rothblatt, 2013). In addition, with the advent of advanced AI and uploaded minds would appear the question if digital minds experience gender in the same way and would be entitled

to similar rights when it came to it (ibid). Ornella (2009) discusses the nature of sexuality and how that technology that aids with it is massively funded as it develops by the sex industry, due to the nature of humanity, and how it involves the whole of the human being. Bodily sex may remain only one in a range of erotic possibilities for all people (ibid). Otherwise, Lee and Carpenter (2015) explore the need for LGBTQ+ visibility in education, which I argue is important in order to help developments in transhuman technology keep them in mind as they develop.

With mind uploading – or as some might consider, the 'ultimate' form of a cyborg, where the conscious mind has been removed from the flesh entirely, into a computer of sorts. The framework is much more theoretical, since such a thing is not yet possible – the theory often crossovers with the existence of purely digital minds, or 'artificial intelligence', a very real and developing technology. Sullins (2000) notes that as before, the computer and its offshoots are 'addictive and alluring' technology, a 'mental prosthetic' of sorts. Therefore, to take it further, to allow the human mind to thrive inside a computer, or perhaps the internet itself, is an interesting proposition; with games and other mediums, we already have avatars that can traverse cyberspace (Sullins, 2000, 15). However, transhumanists do believe that this evolution into digital beings is possible and allows us to avoid biological deterioration. However, there is ethical conflict with this practice. For instance, we can replace limbs and parts of the body, barring the brain – if that is replaced via uploading, is the individual within the computer the 'same being' (ibid, 19)? As for the aim of using it to avoid death, Geraci (2010) does acknowledge that continued existence is a desire for many humans, and that uploading would create a 'true paradise', likening it to the Japanese Shinto religion, where even robots and other inanimate objects are considered to have a 'spirit'. The continuation of sci-fi and transhumanism's growth would therefore increase interest in these fields (Geraci, 2010, 1004). All of these contribute to what Belk and his colleagues (2020) refer to as Artificial Life (AL), whose history and myths are said to inform the development of said technologies – for instance, as we fear AI and the 'mad scientist', we deliberately make sure to avoid these based on fiction we create.

Next, these exists the topic of life extension theory, both in general, and also looking at one popular option, cryonics – or, the freezing of human bodies in the hope that they can be resurrected and treated of any incurable illnesses later in time, where medicine is assumed to have further developed. The numbers show that it is a very popular idea,

especially in the United States, where there are companies dedicated to it – though the numbers vary between author and time period (Moen, 2015; Romain, 2010, etc.). The technology is also treated with some scepticism, but it has some current use in medicine, specifically the preservation of human organs, but otherwise, it is a mere 'speculative investment' (Romain, 2010, 195). Other debates include whether future technology, such as nanotechnology, can truly revive the 'dead' (Moen, 2015, 678), as well as what constitutes 'dead' people and their rights, after cryonic freezing (Romain, 2010, 200). Otherwise, the main issues with living longer and cryonics include moral issues such as what might happen upon meeting the 'future' – culture shock, depression due to the certain death of loved ones, and one's place in the 'new world' (Moen, 2015).

Similar moral dilemmas are brought up in the topic of genetic modification, the alteration of the human genome – which in transhumanism, generally pushes the use of research that supports it, such as stem-cell research, for benevolent causes such as healing incurable diseases, and perhaps, once again, life extension. However, it is not unfeasible that someone may attempt to use it for unethical purposes once more (Edgar, 2009, Glover, 2006, etc.). Transhumanists generally reject such purposes for it - it is governments that some are worried about, since they are responsible for the massfunding of medical projects that otherwise are grounded in 'reality' (Jones, 2006) – the only time where great changes occur are in times of peril, or crisis, leading to socioeconomic change (Yudin, 2007). Indeed, Jones believes that the number of 'liars' who promise 'false enhancement fantasies' due to the science not being perfected or anywhere near such damage its reputation, there is truth in the theory behind large-scale genetic alteration. Progress has been made in using this medicine to treat the living from various illnesses, and research in that vein continues today, simply not on the scale that transhumanists would perhaps desire.

1.7.2: I, Human – Identity and the Trans/Posthuman

The current theories, ones that are widely discussed when considering ideas of the trans/posthuman today, are divided into three – identity, agency and power, and new materialism/non-anthropocentrism, the latter described above. The first, identity, was

briefly touched upon with Haraway's work, of feminist and human identity concerning the 'cyborg' – and Haraway's desire to be one rather than the traditional, maternal 'goddess' (Haraway, 1987, 37). Moving on to more recent theory, however, Lee (2016) discusses the use of cochlear implants and neuroprosthetics in biomedical engineering, and uses this as a springboard from which to launch his discussion on posthuman identity, as Lee believes that these advanced technologies will be 'highly likely' to spur a posthuman future (Lee, 2016, 68). Interestingly, Lee goes on to divide the facets of this 'posthuman identity' into four key ideas – autonomy (the freedom to choose), identity, futures (children and parents' rights in transhuman operations), and community (governmental responsibility to protect altered/unaltered groups) (ibid). Particularly noteworthy is a discussion reminiscent of Fukuyama's anxieties, where Lee uses the example of the deaf community, one that may become 'extinct' should cochlear and brain implants eradicate deafness as a condition, and whether these people, as a potential minority, should be free to remain unaltered if they so choose (ibid, 74).

As a similar line of thinking, Pedersen (2016) brings forward Bostrom and Kurzweil's claims that a longer life is undoubtedly a better one and criticises them in turn, raising the potential objection that human agency and individuality, as well as free action, is only possible when human existence is finite (Pedersen, 2016, 269). To this end, Pedersen brings forward the concept of 'healthspan' as an alternative to 'lifespan', as a term for how long humans would remain young and healthy in this prospective posthuman future (ibid, 270) – as well as the concept of morality and identity in that those who sacrifice themselves are seen as 'good' – but such virtues may disappear if we cannot die, and considers whether this would be a fair price to pay for the total loss of freedom that is death (ibid, 271). Pedersen does, however, concede that trans/posthuman supporters may accept that some loss of agency is fair when faced with the potential of continued existence.

A much more grounded identity example can be found in Reddington and Price's study (2016), which discusses the 'posthuman' identity alongside identities within the autism spectrum. Beginning with the seemingly mundane, but highly relevant example of students being virtually 'attached' to their smartphones (Reddington and Price, 2016, 882), the two discuss the popular cultural depictions of autism in film and television, and how these have led to the common image of the autistic child/teenager obsessed with toys and technology, even leading into adulthood (ibid, 884). They then conduct an

interview with an autistic youth named Arthur, who describes his 'cyborg fantasies', of using technology to make himself 'cooler' and more socially appealing (ibid, 890), showcasing the subtle connections that even the mere ideas of the posthuman create towards new identities.

1.7.3: Agents in the Matrix – Posthuman Agency and Power

Power is another key theme in the framework of this thesis, and as mentioned above, the use of technology and medicine is often decided by those in power. But what does it mean to have 'power', or even 'agency'? This idea of agency and human autonomy is one that Pedersen touched upon; but many more have considered the posthuman and agency in even more detail. For instance, Jones' (1996) study discusses that there once was a strict boundary in the scientific philosophies that divided the 'natural' and the 'social' (Jones, 1996, 290). However, the disruption of previously common-sense ideas such as 'mankind', 'nature' and 'society' began to chance as social life became enmeshed with technological projects (ibid, 291). Jones makes the suggestion that posthumanism and poststructuralism both seek the collapse of agency in its 'normal' form - that humans are not truly agents at all, due to various societal and social constraints (ibid, 294) - and that science and technology limits us too much for posthumanism to be viable, as humans cannot escape the 'laws of the world', such as how the world is run by money. A seemingly fatalist perspective, it is an interesting critique of posthuman desires. Another social discussion on the posthuman exists in Garoian and Gaudelius' work (2001), where they discuss the idea of the 'cyborg' in a very Haraway-esque manner, of the more grounded variety not seen in media (Garoian and Gaudelius, 2001, 335). The two also discuss the agency of the 'only machine', the robotic parts that make up the other half of the cyborg, and make an early move toward the new materialist stance, that technology needs to be thought of as 'performative and embodied' (ibid, 346).

Alongside the discussion on a possible resurgence of eugenics (Foster et al) detailed earlier in the thesis, technological determinism and neo-fascism has made itself known

within transhuman circles, particularly online – Pinto (2019) discusses this in regard to the growing cyber-libertarianism seen within IT and computer science spaces (ibid, 319), and how the powerful few could very easily tip the scales of power through cryptofascism and using transhumanism as a cover to create a 'super race' or 'master race' through perceived technological and intellectual superiority.

Aside from Haraway's works, detailed earlier in this review, there are others who have fashioned ideas of power in a postmodern context – most famously, perhaps, is Michel Foucault, whose work is referenced in the *Manifesto for Cyborgs* as 'a flaccid premonition' of the 'cyborg politics' she worked on (Haraway, 1987, 2). This was in reference to Foucault's theory of 'biopolitics, and 'biopower' (Foucault, 1991). During his work on systems of power and bodies (in this instance, within prisons), Foucault used the term 'biopower' to discuss the ways in which the body could be changed and trained to suit the needs of society – in the case of the needs of capitalism to make the body into a production machine, for instance, and is only seen as useful if it is 'a productive body and a subjected body (Foucault, 1991, 25). This effect can be seen in the case studies I have chosen – why are cyborg bodies useful in the context of video games, or in the shape of women? This will become evident as the thesis progresses, particularly in the answers of the interviews, which are heavily involved with cyborg labour practices, amongst other Foucauldian topics.

These topics are discussed by Abrams (2004), who discusses Foucault's view that our current level of technology means that society already controls our bodies through this concept of 'biopower', as by being watched, be it through the media, the internet, or other means – the mass surveillance (Abrams, 2004, 242) that pervades the modern world dictates how we perceive and present ourselves, as our fear of being watched would then restrict our freedom – which could go against common transhumanist ideas of free choice.

Cerulo (2009) alternatively discusses the power relations between human and non-human objects through Actor-Network Theory (or ANT, a model designed to showcase networks of agents interacting with each other), discussing the old ideas that nonhumans lack the drive, ambition and goals to engage in true interaction, rendering them 'mere props' – however, ANT suggests that nonhumans can indeed be actants

when part of a larger, human-driven network (Cerulo, 2009, 534). Once again, Haraway's cyborg is made reference to, as a 'unique actant (action taker)' through which new social interactions have appeared - such as driving, parking and polluting (ibid, 535). In addition, Cerulo discusses the ideas of gender characteristics being given to nonhuman objects, as well as the concept of religion as an interaction between the human and nonhuman entities such as deities and the deceased (ibid, 539), concluding that these interactions with the nonhuman help us understand humans more clearly. Cerulo's concept of the projection of humans' wills into nonhuman objects such as drones (ibid, 536) is something explored by Schandorf and Karatzogianni (2014), who discuss the difficulties of these techno-social interactions when drones or other remote weapons are involved, and the difficulties of political and social discourse when, for instance, drones are used to carry out killings, and the operators of said drones can feel as if they have directly killed their targets. As an reversal of perspective, Hayles (2001) brings forward the idea of the use of metaphors to codify the agent – citing Dawkins' The Selfish Gene, Hayles considers Dawkins' use of language and metaphor amongst his scientific literature to construct the 'gene' as 'protagonist', it becoming an actor while the human is relegated to a remote-control mechanism, as if it were a non-human object (Hayles, 2001, 147) – relating to her interpretation of the body in posthuman thought as an 'originary prosthesis' that the brain learns to operate from birth (ibid, 146). Ultimately, Hayles describes her 'preferred' posthumanism, of distributed cognitive systems that include both human and nonhuman actors - another move towards what would become new materialism.

Furthermore, returning once more to Gottlieb's work in *Digital Materialism* (2018), Baruch discusses that posthumanism can be seen as something utterly distinct and removable from transhumanism (Gottlieb, 2018, 146); as posthumanism could instead represent a critique of 'patriarchal epistemic and event ontological frames', which structure enlightenment humanism. This version of posthumanism frames humanity as a natural phenomenon irremovable from the universe, technology being an extension of this. Indeed, this reinforces the ideas discussed in the anthropocentrism section, and how no matter how far removed we may get from the human shape, it is something that we may return to time and time again, despite all the physical changes.

This section, then, has provided an adequate explanation of the various ideas that the trans/posthuman embodies, as well as the separate philosophies, ideas and themes that

embody said ideas. With this, the hypothesis of this work can take form, and this, along with the methodology and proposed fieldwork, will be detailed in the next chapter. In addition, these ideas have helped form a hypothesis and a framework around which the methodology will be developed – that of a critical view of transhumanism that acknowledges the progressive ideas that transhumanism embodies and infuses into popular culture, while not personally subscribing to it due to its problematic history of being entrenched in the western 'elite' as well as 'anthropocentric' tendencies. This will work its way into said methodology, which explores more thoroughly these ideas of the 'body', 'identity', and 'power'.

Chapter 2: Methodology

2.1: Media Studies Methodology: Case Studies

This section will cover the mediums I plan to study – video games and screen media (television, film). As such, they will build upon the background literature discussed in the previous chapters, as well as tried and tested methodologies that I have considered when creating this thesis, starting with the first methodology I have chosen: case studies.

2.1.1: SF Methodologies

During the initial literature search for SF-review texts, the first, and perhaps greatest and most recurring method that has appeared is that of visual analysis; specifically, that of 'semiotics'. This research method involves the research of 'signs', of objects, characters or narrative points that might suggest a certain 'idea' or 'theme' (Berger, 2011, 50), in order to help prove a specific hypothesis. With the subject of many of these pieces of research being science fiction films or television series, it might come as no surprise that this is a method widely used. One particularly good example of this methodology being used is that of Chaffey (2013), and her reading of the TV series *Farscape*. Using a theoretical background of the 'tele-odyssey', and television and the body, Chaffey begins to examine the plot and characters of *Farscape* and the fictional universe that it portrays, with examples of 'fragile identity' and bodies intermixed with technology, being compared to something ordinary and 'everyday' (Chaffey, 2013, 87); this helps prove Chaffey's point that television is able to 'sweep up' people and

intoxicate them with familiar, yet different escapist ideas (ibid, 91). More examples of this include Gil's (2015) study of the popular series *The X-Files*, exploring the idea that the series in question is 'dangerous' to SF, due to the possibility it helps promote 'unscientific' viewpoints that may be harmful to the reputation of SF and science both (Gil, 2015, 65). In addition to semiotics and narrative analysis in the plot of episodes of *The X-Files*, Gil also makes character analyses of major characters such as Agent Mulder in order to reinforce his points – Gil also makes several references to previous studies of a similar nature, further cementing these methodologies as often used ones (ibid, 73). Indeed, various other works have followed this formula (Kaes, 2010; Hyeck, 2011; Tyree, 2012; Pheasant-Kelly, 2015; York, 2016).

Another academic piece, this time by Christine Cornea (2011), once again aims to study a set number of SF texts – this time by the notable author John Frankenheimer (Cornea, 2011, 229). However, this research is conducted quite differently with the addition of a biographical research technique of Frankenheimer himself, giving a much different angle to the work; Cornea studies three films under his direction using these techniques of visual analysis and semiotics, linking horrific imagery caused by the fictional effect of science and technology on humans (including bodies being consistently 'lacerated', 'penetrated', or 'reconstituted') to Frankenheimer's own troubled life, his struggles with personal loss, depression and alcoholism (ibid, 230). In another alternative use of this methodology, Geraci (2011) gathers a number of SF texts together to study depictions of immortality, relating them to Transhumanist and secular communities as 'religious texts' (Geraci, 2011, 141). In doing so, while employing the usual techniques, Geraci provides minor biographies of the authors he studies, though not to the extent of Cornea. However, what Geraci does do in turn is use second-hand interviews as a legitimate form of data, using this to add emphasis to his points, literature and texts, allowing for a more in-depth study of both SF text, and author (ibid, 153). This religious angle is further explored by Lorrmiar (2018), who posits whether an immortal life is necessarily a 'good' or 'joyful' one (Lorrimar, 2018, 554) – and whether this is only the case for those who subscribe to transhumanism (ibid, 557).

Other authors studied here have not necessarily kept purely to film or television in their SF studies. Literature provides a large pool of texts for science fiction, and so many have taken to exploring it in different ways – For instance, Cockin (2016) studies Jeff Noon's novel *Pollen* in a way that provides credence to her theories that SF works

predict major movements in scientific fields that they relate to, such as a film featuring forensic science might further its real-life research due to the popularity of said film. Here, of course, as opposed to visual analysis, Cockin uses literary, specifically textual analysis, in order to make her points. Textual analysis, in brief, entails the art of 'reading in a specific way' – it lends credence to the 'death of the author' theory, that even if the author had intended a text to be read in a specific way, there is still room for other interpretations, especially if a text is aged to the point where the author is deceased, and perhaps no records exist that could shed light on his or her original intentions (Belsey, 2013, 166). In this case, Cockin reads *Pollen* in a way that emphasises a feminist standpoint, as well as a study in the posthuman, stating that it is a text representative of SF being obsessed with the concepts of 'avoiding death' or establishing an 'afterlife' of sorts (Cockin, 2016, 94). A similar approach to this theory of 'textual analysis' in SF literature can be found in 'discourse analysis' (Griffin, 2013, 98). Griffin describes this method as reading the use of 'language' in order to 'create a world' – citing *Pride and Prejudice's* description of what an 'eligible bachelor' should be like (ibid). Narkunas provides an example of applying this theory in analysing Margaret Atwood's 'MaddAdams' trilogy of SF novels (Narkunas, 2014). Here, Narkunas reads into Atwood's post-apocalyptic world where only a handful of humans survive amongst genetically engineered creatures, including near-humans known as the 'Crakers'. Narkunas points out the irony in the Crakers and their naming convention, as their fictional creator, Crake, wished to wipe out organised religion, yet became the 'god' of the Crakers by naming them after himself, and was deified by them after his death (Narkunas, 2014, 19).

Other authors have taken up a largely or even purely theoretical approach to SF, without making reference to specific texts. Zeng, for instance, discussed the impact of science fiction and artificial intelligence studies and how they have indeed become a large part of the public consciousness (Zeng, 2015). In addition, Zeng summarises various discussions between academics and other thinkers, in order to gauge the current state of the field, and how AI research and SF studies intertwine. A combination of this and biography can be seen in Slusser's work on Gregory Benford, a prolific science fiction writer (2014). Here, Slusser quotes and makes reference to Benford frequently, while also making references and comparisons to other scholars and their works – such as Descartes and Pascal, in order to make the argument that science has been 'writing

the fiction' for a long time (Slusser, 2014, 18). Similarly, Haynes (2014) uses a large theoretical and political background to the minor semiotics and character analysis used on a large variety of texts, without going into too much detail on each; in order to discover what happened to the old stereotype of the villainous 'mad scientist' trope common in SF works prior to the 21st century.

2.1.2: Video Game Methodologies

When it comes to methodology for video game studies, there are both similar methods and wildly different ones, and it still remains a very experimental and recent field, changing as often over the last 30 years as video games themselves have. Therefore, it would be prudent to start with those who have created purely theoretical work as their methodologies. Various scholars took this approach, (Apperley, 2006; Berger, 2002; Frasca, 2003; Jenkins, 2004), but there are a couple of examples that stood out amongst these. Alexander (2011) embarks on such work in order to prove what many scholars have attempted to do in the wake of mockery and derision of the field – that video games are worthy of study just as much as any book, film or television series (ibid, 91). In doing so, he explores the basic visual and semiotic analyses of music, cinematic and text, while also delving into the more experimental methods such as 'fragmented storytelling' (ibid, 113) that some games employ, with their stories resembling puzzles to complete by the player. Not uncommon with these studies is also a very rudimentary look into 'fan culture' surrounding gamers, or 'gamer culture', to be fully detailed in the next section; Alexander takes a brief look at 'Let's Play' and 'Machinima' productions, both fan-productions usually involving video games (ibid, 115, 121).

Eskelinen (2001) notes that outside academic theory, people make the distinction between narrative, drama and games easily, while with video games, their methods are 'colonised' from literary, theatre, drama and film studies, and are thus limited and outdated in Eskelinen's view (ibid, 1). Here, Eskelinen uses theory based on what is 'exclusive' to the video games – that is, treating them as 'remediated' games and

looking at the rules, equipment, means and ends, and how the player goes from beginning to end. In addition, he notes that in literature, film or theatre, all elements are said to matter 'equally' when read, and one must 'read it all' (ibid, 2) to get the full experience – yet with video games, these signs and media can be 'picked and chosen', and multiple narratives can be chosen, depending on the game. Also touching on player-to-player ideas, as well as agency within video games, Eskelinen's theory leads him to conclude that these media are in fact vastly different (ibid, 8), which helps reinforce the necessity for different theoretical approaches, and echoes the critique around comic book/graphic novel analysis also being based on literary/film studies.

Some researchers, however, took to the use of surveys and interviews to conduct their research, which provided insight into a much different demographic than many ones that had come before, again verging close to the 'fan culture' studies in terms of scope. For instance, Hartmann and Klimmt (2006) engage in a gender study based in video games, primarily to discover what women like and dislike when it comes to video games. To this end, they use prior theory on the fact that women playing video games have increased in number and the backlash against female characters and their stereotyping (ibid, 2) to devise two studies. The first (ibid, 5) involves an offline survey involving women of 18-26 years of age, the questions focused on how these women consume video games, presenting examples with different values of 'violence', 'social interaction', and 'sexualisation' – finding that women preferred social interaction, and were in fact not repelled by the sexualisation of the characters – some accepting the stereotype. The second study (ibid, 11) was a survey based online, in order to determine male and female preference for various video game 'genres', and a simultaneous study of German video game fan sites was also conducted, in their 'banners, posts and chats' - in other words, another brief glimpse into 'fan culture' while primarily exploring video games. Ultimately, these studies were subversive in that they had found different results to what they had been expecting, but their study of video games alone provides a different respondent base that is constantly moving with video games.

Geraci (2012a) published an interesting work on transhumanism and video games, a staple of this very research, in which he presented a series of interviews (and one survey) with two distinct groups (ibid, 738) – the first was with game developers, asking them various questions (albeit unseen ones; interestingly, only the answers are seen) about transhumanism, religion, and how these factors went into the development

of their games, which were included as case studies as well; famous titles such as *Deus Ex* and *Mass Effect*. The second is, once again, aimed at the fans, or 'gamers', in the form of online message board posts in lieu of the usual interview or survey method, but the answers gained remain in line with the methodology – they, of course, speak from more of a layman's angle, but provide Geraci with fuel for the conclusion he desired, of video games being an important tool of study in the arts and sciences both (ibid, 751). Interestingly, however, it is important to note that rather than completely separating the case studies and theory from his interviews and surveys, Geraci instead employs a method of merging everything into one narrative, which is a unique direction that makes it easy to follow.

Finally, there remains the scholars who made their primary focus 'case studies', in this case largely relying on semiotics, narrative analysis and other similar methodologies to make their points based purely on the video game texts themselves. Again, there have been various scholars that have used this method (Ang, 2006; Beasley and Standley, 2002; Consalvo, 2003; et al), but this section will focus on two individual works. The first of these is Cross (2013), who in her work studies role-playing games (or RPGs) as 'resistance', looking at how these games are subversive in their treatment of gender in virtual worlds that borders on the transhuman (ibid, 80). Her chosen case studies here include the oft-studied *World of Warcraft*, and cites the ability to play as the opposite gender to yourself allows for trans people and others who would like to subvert binary or common gender roles (ibid, 74), be it simply for a 'temporary' experience or a more permanent one. The second case study, of *Eclipse Phase* (ibid, 76), acts more as a conduit for her transhuman theory, discussing ideas of transcendence outside the physical body in a post-apocalyptic world where death is considered a 'disease' to be cured.

The second work, however, is something with different aims, and makes a fitting link to the fandom studies section. This study, by O'Gorman (2015), begins with a description of a 'glitch' (a coding error that usually results in either the game crashing or allowing for access of features unintended to be seen by the developers) in the video game *Call of Duty 4: Modern Warfare*, in which players are able to climb trees where this would otherwise be impossible to do so, providing power and security within the game that cannot be obtained any other way (ibid, 71). However, this provides a gateway for O'Gorman to proceed to discuss the forums and fandom that surround such glitches,

and their discussions with fans that would stop at nothing to discover everything they can about any given video game. In fact, he combines the two later in the article with the concept of 'heroes' and 'martyrs' in video games and their culture (ibid, 88) – citing the addictive nature of MMORPGs (Massively Multiplayer Online RPGs) such as *World of Warcraft* or *Everquest*, while also citing examples of 'heroic' actions in game that would not be possible in real life, driving certain individuals to their deaths for such actions by playing for extreme levels of time at once, leading to their existence as 'martyrs'.

2.1.3: Bringing the Two Together: Case Studies

Case studies provide a solid grounding for the textual analysis and semiotic study of texts that have great analytical potential, as seen with the examples mentioned above (Ang, 2006; Beasley and Standley, 2002; Consalvo, 2003; Geraci, 2012b; et al). With two linked video games and one recent influential film, these texts had to be both popular and influential in their markets and genres in order to establish that they might have had a marked effect on their consumers — The message board and Skype discussions mentioned above will also extend to asking opinions on the themes and narratives of these texts, to serve to bolster the case studies. The other forms of study here will take the form of semiotics and visual/textual analysis (Berger, 2011, 50; Belsey, 2013, 166), taking cues from the games' text, dialogue, moving image and interactive gameplay to form a 'map' of the themes that make themselves known throughout the games.

The first video game chosen for study is *Xenoblade Chronicles* (2011) – a game which has received critical acclaim, and enjoyed a successful launch, selling around 900,000 copies worldwide (VGChartz, 2011). This game has various reasons for fitting into this study, and these reasons are not limited to that of its narrative. For instance, *Xenoblade Chronicles* is an RPG (Role-Playing Game), a genre specialised in emphasising the possibility of all games for the player to 'become a character' through controlling them

and seeing the narrative through 'their eyes'. This feature has been commonly linked to the transhuman idea of becoming something else in a virtual world (Geraci, 2012), and the virtual world that *Xenoblade Chronicles* provides is one of the largest that had been seen at the time of its creation. As for the narrative, there are many themes and points to explore in depth later in this work, but these SF and transhuman themes are vast, and include, but are not limited to; the existence of cyborgs, artificially created 'humans', mechanical life and AI, and the deification of human beings. Combined with the popularity and relevance of this recent game, there's no doubt that *Xenoblade Chronicles* will serve as an important part of these case studies. Having recently completed an approximately 80-hour play-through of the game, my findings on this work use narratology, ludology, and the semiotics and visual analysis that goes along with them to identify themes that were detailed in the literature review.

The second video game chosen has been done so thematically – its name is *Xenoblade* Chronicles X (2015). Not a true sequel, but rather a 'spiritual successor' to Xenoblade Chronicles, this game was created by the same development team as the game that preceded it, leading to the use of several gameplay and narrative aspects that evolved from the previous game, as well as using ones intended to be used, but were ultimately scrapped from said previous game. Due to its predecessor's success, this game inevitably followed suit and was also well received upon release, being released for Nintendo's Wii U system four years after the original – indeed, *Xenoblade Chronicles X* sold much to the same success that the first game did, selling over 700,000 in its launch window, and another 163,381 in 2016 (VGChartz. 2016). Once again, the game serves as an RPG, with an even more expansive world to explore – only this time, the player avatar is not a fixed character, but a variable one, which the player can tailor to his or her specifications, including hair, skin and eye colour, as well as body type and gender – a feature that fits into both trans and transhuman potential as brought up by Cross (2013). As with its predecessor, Xenoblade Chronicles X brings forward some of the same themes that *Chronicles* does, but with more depth, and proceeds to add new ones to the table; these include humanity removed forcibly from Earth and being stuck on a different planet to continue their existence, the existence of androids designed to completely mimic human physiology, the possibility of DNA banks that can create life, and much more. As such, this short series of video games will be studied together, in order to explore their potential in spreading trans/posthuman and SF ideas to the masses, and how they may cause their players to think and feel about the potential of these 'dangerous' ideas. Having played over 60 hours from start to finish, this game will have a heavier emphasis on ludology due to its nature and will include data from the interview with my respondent Chris Kwong, who is knowledgeable about the game's online features and community.

As to not focus wholly on video games, though they will be studied as a pair, the film chosen for this research, an influential and acclaimed sci-fi (and psychological thriller) film named EX_MACHINA (2015). Written and directed by Alex Garland, EX_MACHINA was created with a budget of \$15 million, and the film is well known for its philosophical themes and strong visual effects, being considered wildly successful, having sold more than \$36 million at the box office, usually unprecedented for an independent film (boxofficemojo.com). The film follows the story of a computer programmer, Caleb Smith, as he visits the home of a wealthy and eccentric scientist named Nathan Bateman, who has created an AI with a realistic face upon a robotic body, Ava, who has already passed a basic Turing test – and requires an advanced one, where the human partner already knows that Ava is a machine. Ultimately, the film focuses on the relationships and subterfuge performed by all three main characters on each other, showcasing Ava's intelligence and sentience due to Nathan's breakthrough in robotic brain technology – and the other two character's reactions to the growing realisation that Nathan's creations may have indeed taken on 'lives' of their own. Praised for its narrative and having won several awards, EX_MACHINA plays with both the hopes and fears alike of those aware of these scientific breakthroughs and the concept of transhumanism, and the themes of advanced AI, the fear of not being a 'real human', and the role of a human 'creator' are performed incredibly well, and will receive a thorough analysis when the case studies truly begin, as well as receive crossreferencing with other notable SF films that have touched on the same issues (Blade Runner, et al). The analysis of this work will take a similar style to the other two case studies, looking through the visual analysis and semiotics that EX_MACHINA provides, being within the context of a sci-fi narrative – in this instance however, where there would be discussion on gameplay for video game texts, there will instead be heavier emphasis on the 'visual effects', and how those are presented and tie into the themes I wish to explore – this is because, though video games have graphics and interactive mechanics to display their ideas, film's main draw for representing the fantastic is largely through visual effects (such as CGI, etc.) which exist alongside the practical effects and actors that otherwise make up the film.

It could be questioned why these particular texts have been selected, as opposed to some of the other ones I have discussed – such as the widely popular and influential Deus Ex series, or classic films such as Blade Runner. The reason those are mentioned as archive examples and not used in this work are because they have been, as seen in the references I've used – used many times, whereas the media examples I've chosen are both popular enough to be noteworthy (as seen above), and the depth of their thematic elements and representation of humanity both before and after a transhuman experience will be explored in the following chapters.

That said, how these semiotic and textual/visual analysis methods are applied will be central to the findings of this work. Earlier, the details of the narratology and ludology debates surrounding video game culture was explored; narratology focusing on the narrative and its signs and symbols, and ludology focusing on the gameplay and human interaction. While only the former can be applied to EX_MACHINA as a film text, the human interactions seen with its fans and viewers have room to be explored thoroughly in the interviews. However, with the *Xenoblade* series games, particularly the latter game Xenoblade X, both narrative signs and ludology can be used – through studying characters, both playable and otherwise, the main narrative of the game, and the game's virtual world for the various signs and ideas it evokes. This is largely due to the fact that Xenoblade X has gameplay mechanics that make it a pseudo-MMORPG (Massively Multiplayer Online Role-Playing Game), a genre explored in the literature review. As such, thorough study of the game's very active (at the time of writing) online community alongside the live interviews should make for a very smooth bridge between the two styles, and showcase the difference in ways information and ideas are transmitted between the film, the offline video game, and the online video game. Furthermore, these ideas will be bolstered by using secondary developer interviews that concern the games in question, similar to Geraci's (2012) work – taken from publicly sourced interviews to help illustrate the original intent of the authors and developers alongside my own discussion and interpretation of the media texts.

2.2: Fan Studies Methodology – 'Nerd' Ethnography, the 'Aca-fan', and Comic-Con Interviews

Ever since the first media works were performed thousands of years ago, the concept of the 'fan' has existed – those who avidly follow various works of art, fiction, and various other activities, such as sport, though this research primarily focuses on the former. With time, various communities grew out of collections of fans that shared common interests, and became known as 'fandom', or 'geek culture', particularly where interests such as SF, video games, and similar pursuits are concerned. This particular research benefits this project due to its interaction with fan culture, forming half of the informants in the interviews concerning transhumanism, video games, and SF; as well as an observational study based in a well-known fandom community.

As seen above, there is a significant amount of video game studies methodology that crosses over with that of 'fan culture', the study of fans of various media - either in general, or focused on individual media forms or texts, such as television and film, or in the case of a more specific fandom, *Star Trek* (amongst many, many others). Therefore, it's prudent not to go over the same material, so this section will be mostly concerned with general 'geek culture' fandoms, or those of specific television or film texts. Incidentally, the primary methodology seen within the texts studies here appears to be a wide mixture of cultural studies ethnographic methods. such and 'ethnomethodology' (Berger, 2011, 174), which is based on studying the interactions of people in an observational manner, how they think, act, and is described as the theory of 'common sense'. The other, often combined with the prior method, is 'participant observation' – which again involves studying people in 'real life' situations (ibid, 189), but is used largely to discover specific facts or themes, and tends to take more details about the participants, knowingly or otherwise, but is usually anonymous, these details including age, gender, and others (ibid, 192).

In a similar bend to Geraci's brief use of message boards, Dunlap and Wolf (2010) take a more full approach to the use of these methods on an online community, namely the *Fandom Wank* website's forums – a site described by Dunlap and Wolf as a community dedicated to 'pointing out and laughing at' drama created by fandom in its various

forms (Dunlap and Wolf, 2010, 267), creating an odd layering of fandom, studying one that parodies, criticises and mocks many others. It makes for an interesting methodology that the researchers think critically about during the article, considering their own 'positions' as researchers and observers, and where they stand between academia and fandom itself, a balance that, again, must be considered in this very thesis. Otherwise, bearing in mind the strong opinions and language put forward by the FW community (ibid, 272) as they go, the study simply identify claims made in the various message boards the pair have browsed, and use their findings to conclude with another interesting consideration in the methodology behind fan culture – that there are intellectual discussions even to be found in 'vulgar' circles such as the FW community, and that academics must not 'cherry pick' from clean and ideological structures that academia suggests when conducting such fieldwork (ibid, 281). Similar theorists studying 'controversial' online communities include Massanari (2015) and 4chan/Reddit, studying the 'GamerGate' controversy.

Returning to the physical world, and serving as a partial inspiration for this research project's own methodology, Jenkins (2011) takes to a much more traditional observational study, directly studying the workings and people of San Diego's annual Comic-Con – a 'geek culture' paradise and hub for pop culture; including celebrities, news, and sometimes even academic conferences – Jenkins describes it as a 'meeting point' between trans-media commercial culture and a 'grassroots participatory culture' (Jenkins, 2011, 23). Massive in scale with over 140,000 people attending the 2011 Comic-Con (ibid, 24), Jenkins largely scours the paths and stalls that fill the bustling convention hall, taking note of both human and inanimate surroundings, taking note that the convention seems to 'emphasise fans as consumers', evidenced by the large amounts of merchandise available as far as the eye can see, as well as noting that convention-goers are 'early adopters' of communication tech, with many users of Facebook, Twitter, and various blogs visibly keeping track of the event themselves (ibid, 25). In addition, Jenkins sees various pilots for comics, TV series and other prospective texts of varying budgets, concluding that Comic-Con serves as a 'jury' for whether these pilot shows will take off or change depending on feedback from the community (ibid, 27). Combined with various other observations that amounts to 'sensory overload' (ibid, 28), Jenkins concludes that it almost represents a ritual for many people, to make and share experiences, himself no exception.

Other methods, as found, were more traditional (such as O'Gorman's case study-based work), a large one being interviews and surveys, these often taking place within a similar background to that seen with Jenkins' Comic-Con experience, with a tendency to interview people based on animé/manga fandom (Chen, 2012; Ollie et al, 2006), although Chandler-Olcott and Mahar (2003), take a more dynamic approach. Though the fandoms are the same, these scholars instead opt to focus on the more creative aspects of this fandom, namely 'fanfiction', narratives created by fans to supplement existing works, often using the same characters or settings, something Chandler-Olcott and Mahar describe as the 'raiding' of mass culture, and is most common amongst adolescents (Chandler-Olcott and Mahar, 2003, 556). Aside from the unusual age range for participants, the methodology, understandably, takes the form of free-flowing dialogue-based interviews (ibid, 557), in order to try and discover the appeal of fanfiction from the creators themselves, finding that it exists as a far more casual pursuit in the western world than in Japan, for instance, where it exists as a far more professional and well-paid trade (ibid) - a study also taken by scholars (Lam, 2010, et al). Ultimately, this methodology leads them to conclude that 'medium awareness' is needed even for informal landscapes such as those that house fanfiction and other such fan works. Other scholars, such as Russo (2009), focus on similar matters such as 'fan videos' on websites such as YouTube, and how they spread.

As with the other subjects, there are studies that are theoretical in nature, though they are notably fewer in number than with the other subjects, which is fitting for a subject in which fans are 'studied', which at the very least implies some form of interpersonal fieldwork as seen above. However, one particularly interesting theoretical piece fits well when compared with Dunlap and Wolf's critique of the FW community and of 'fan studies' in general, and that is Cristofari and Guitton's (2016) work on helping to establish an 'operative framework' around what they refer to as the 'aca-fan'. In context, the 'aca-fan', a combination of the words 'academic' and 'fan', refer here to cases such as themselves, and Dunlap and Wolf, who identify as both while also seriously studying the fandoms that they may or may not be a part of (Cristofari and Guitton, 2016, 2) – raising a problem similar to the consideration in ethnography of 'going native', or becoming too subjectively biased towards the group of people you are studying (Kanuha, 2000, 439). A critique of the overarching methodology itself, Cristofari and Guitton explore the fickle balance that an 'aca-fan' can have between

their two states of mind, and that 'participant observation' as has been described above may not suitably cover the heterogeneous entities that fan communities have become in recent years (ibid, 7). Concluding that it will take much more study than can fit into one article to discover where the 'aca-fan' lies as an ethical position, the researchers state that the sheer scope of fan studies and the ethical position of taking from said communities and not necessarily giving back makes for an interesting and continued discussion (ibid: 14).

2.2.1: Fan Interviews

The next form of fieldwork research chosen here is the interview. With these, the same process used in previous studies was useful – a combination of face-to-face and Skype interviews serving the same purpose, engaging in semi structured dialogue, with set-up questions, in order to discover the respondents thoughts in a mixture of casual and formal interactions that allow for a wide range of data (Berger, 2011, 136; Chen, 2012). These questions are focused on the themes of transhumanism, their place in media, and related ethical and moral questions, in order to grasp what respondents think on the subject, and whether they feel these changes are likely to happen, if they are positive or negative changes, and how they feel they relate to real scientific practices. The list of questions is as follows;

- How much science fiction film/TV/video games do you consume on average per week?
- Which of these mediums do you favour, if any? Is there any particular reason for the one you prefer?
- What is the first thing that comes to mind when you hear the term 'transhuman' or 'posthuman'?
- How do you feel about the ideas discussed in *Blade Runner/Xenoblade/*etc.? (Depending on any examples the respondent brings up)

- Seeing these cyborgs, genetically altered creatures, and other ideas in fiction, how do you feel these would impact the 'real world'? Who would benefit? Who wouldn't?
- Have these themes in SF/video games/etc. Influenced your educational/career choices, and are they related to any relevant hobbies?

After the first question, which serves largely as an ice-breaker, or to ease the respondent into the topic, each following question has been designed with the express intention to explore the research aims I set down earlier in the thesis. The second question seeks to map out a 'direction' for the rest of the interview – if the respondent prefers screen media, then I'll flavour the remaining topics that way, allowing me to work in specific theories easily – the same is true if video games are picked. The third question begins to directly engage with the material I've been looking for; namely, that of trans/posthuman theory. The topic is directly addressed, so the responses should be genuine, given the respondent won't have had time to research the topic beforehand. The fourth question focuses on media texts, using them as small case studies with which the respondents and I can generate a discussion based on the various texts in their answer – though I am confident I know many popular and niche examples, if I myself am unfamiliar with the media text in question, I can then ask the respondent to explain their reasoning, allowing me to learn about this particular item myself. The fifth question then attempts to bring context to the discussion, particularly in regard to the socio-economic and political climates of the real world, asking the respondent how they believe these ideas would interact with the potential worlds of today or tomorrow, relating back to my ultimate aim of exploring how much people think about these ideas. Finally, the last question builds upon the last one, but in a more immediate context - with the idea brought up by Cristofari and Guitton (2016) that fans can enter professions based on the media they enjoyed, I chose that last question in order to potentially find people who really did make the transition to research or work involving either the media or trans/posthuman technology that they were exposed to.

In addition, these questions were designed to generate lengthy discussion with the respondents, as this form of interview is flexible, working as well in one-on-one discussions as in small groups, which will become relevant when discussing the prospective settings for this study. That said, there are issues to be had with such a structure (ibid), such as bias and changed dialogue from the mere knowledge that respondents are being interviewed, which can put pressure on them, but it is a common risk with interviews – otherwise, many issues come from the respondents chosen. That said, there are advantages to choosing my respondents as 'fans', as I can use discussion surrounding various media texts that many are likely to have knowledge of to spark discussion on these transhuman topics – with the size of my range, this should be manageable with most respondents.

Originally, as with studies beforehand (Jindra, 1994; Lam, 2010; Jenkins, 2011; Chen, 2012; et al), much of the primary research was take place at a convention, namely MCM Comic-Con London, which takes place in the autumn and late spring of each year, and is a series of a few around the country which this researcher has attended for several years now. A hub for activities involving SF and video game fandom, this place boasts tens of thousands of attendees every event and consists of large outdoor areas for recreation and indoor areas where stalls where either companies or other fans have set up commercial and other enterprises. This makes for a natural environment in which to find the first set of respondents, the 'fans', though it as a large environment – it is largely unsuitable for recording equipment due to the noise levels, which thus may require shorthand notation on pen and paper, as well as more reliance on surveys if these do not go as planned. In terms of interviews, around 50 respondents should suffice if possible, in order to get a good range of data, many of which will come from these conventions. That said, due to difficulties in finding respondents at a convention stage and the lack of available recording equipment, interviews were instead carried out via Skype and face-to-face meetings instead, using fan-based societies in Leicester such as the Sci-Fi and Fantasy Society and Japanese Animation society, ones that I was certain would have respondents knowledgeable at a basic level.

In addition, respondents were also chosen with the hope of gaining the insight of academics and/or students, in order to gain a deeper insight. These people, integrated into scientific departments and other research institutions, are not entirely insulated from the media and what it portrays, and the 'aca fan' debate (Cristofari and Guitton,

2016) showcases what an interesting position being both a 'fan' and 'academic' can be – hence, making some of my respondents 'experts' will allow insight into the career choices that some fans may have, whether or not their interest in SF or transhumanism led directly to their career choice – they may have ideas around the prospective technologies and sciences behind the fiction. To this end, this researcher has access to various departments at more than one university, and the names of the institutions and experts will of course remain anonymous. Recording software is far more useful here, since these can be used in a closed and far quieter environment than would be possible in Comic-Con, for instance. Ultimately, I have chosen this method of interviewing because it allows for deeper conversations with the fans and gain their closer-held opinions and thoughts in a calm environment in ways I feel other studies, detailed above, have not.

The sample size chosen for these interviews is based largely on the difficulty of certain people to obtain for interviews, and the locations involved. Of the 50 initially suggested (34 respondents were interviewed total, alongside the separate interview for my *Xenoblade Chronicles X* interview), most were people from fan societies and local areas, with some experts in various academic fields that these themes allude to, as the discussions with them were longer, more detailed, and thus harder to transcribe. Table 1, below, contains the full list of participants, the context of their participation, as well as the approximate dates and locations of the interviews;

Table 1: Participant List

| Participant | Nature of Participation | Date of | Location of Interview |
|-------------|---------------------------|-----------|-----------------------|
| No. | | Interview | |
| 1 | University Student (Hull) | May. 2017 | Online (Discord) |

| 2 | University Student (Leicester) | Feb. 2017 | Bankfield House |
|----|-----------------------------------|-----------|------------------|
| 3 | University Lecturer (Leicester) | Feb. 2017 | Bankfield House |
| 4 | Sci-fi/Video Game Fan (Bradford) | Jul. 2017 | Bradford |
| 5 | University Student (Hull) | Mar. 2017 | Online (Discord) |
| 6 | Sci-fi/Video Game Fan (Bradford) | Jul. 2017 | Bradford |
| 7 | University Student (Leicester) | Feb. 2017 | Bankfield House |
| 8 | Sci-fi/Video Game Fan (U.S.) | Jun. 2017 | Online (Discord) |
| 9 | University Student (Leicester) | May 2017 | Leicester |
| 10 | University Student (Leicester) | May 2017 | Online (Skype) |
| 11 | Sci-fi/Video Game Fan (Leicester) | May 2017 | Charles Wilson |
| 12 | University Student (Leicester) | Feb. 2017 | Bankfield House |
| 13 | Sci-fi/Video Game Fan (Hull) | Mar. 2017 | Online (Discord) |
| 14 | University Student (Leicester) | Feb. 2017 | Online (Skype) |
| 15 | University Student (Leicester) | Feb. 2017 | Bankfield House |
| 16 | University Student (U.S.) | May 2017 | Online (Skype) |
| 17 | Sci-fi/Video Game Fan (U.S.) | May 2017 | Online (Discord) |
| 18 | University Student (Leicester) | May 2017 | Attenborough |
| 19 | University Student (Leicester) | Apr. 2017 | Charles Wilson |
| 20 | University Student (Leicester) | Feb. 2017 | Bankfield House |
| 21 | Sci-fi/Video Game Fan (Bradford) | Jul. 2017 | Online (Discord) |
| 22 | University Student (Leicester) | Feb. 2017 | Bankfield House |
| 23 | Sci-fi/Video Game Fan (Bradford) | Jul. 2017 | Bradford |
| 24 | Sci-fi/Video Game Fan (Leicester) | Feb. 2017 | Bankfield House |
| 25 | University Student (Leicester) | Feb. 2017 | Bankfield House |
| 26 | University Student (Leicester) | Apr. 2017 | Charles Wilson |
| 27 | Sci-fi/Video Game Fan (U.S.) | Apr. 2017 | Online (Discord) |
| 28 | Sci-fi/Video Game Fan (U.S.) | May 2017 | Online (Discord) |
| 29 | Sci-fi/Video Game Fan (U.S.) | Jun. 2017 | Online (Discord) |
| 30 | University Student (Leicester) | Mar. 2017 | Bankfield House |
| 31 | Sci-fi/Video Game Fan (U.S.) | Mar. 2017 | Online (Skype) |
| 32 | Sci-fi/Video Game Fan (Leicester) | Mar. 2017 | Bankfield House |
| 33 | University Student (Leicester) | Apr. 2017 | Charles Wilson |

| 34 | Sci-fi/Video Game Fan (Bradford) | Jun. 2017 | Bradford |
|---------|----------------------------------|-----------|------------------|
| Special | Sci-fi/Video Game Fan (Canada) | Mar. 2017 | Online (Discord) |

Chapter 3: Body

3.1: Introduction

In this chapter, I will be discussing the first of the three major themes, that of the 'body' – as discussed above, this can take many forms when discussing trans/posthumanism, as it very much defines the body as 'malleable', and subject to change; subtly in reality, as seen with instances such as using technology as an extension of ourselves, and more intensely in the speculative fiction of our time, resulting in ideas such as the cyborg, genetic and aesthetic alterations, mind uploading, and many more – indeed, this section discusses the base ideas of 'change', which create the groundwork for the change of 'identity', as well as shifts in 'power' – that make up the other major themes that this work will address. Taking from the media case studies as well as my interviews, this section investigates the idea of what it means to become something other than human.

3.2: Xenoblade Chronicles: Giant Bodies, Changing Bodies

Iwata: "Takeda-san, if you were to describe Xenoblade Chronicles to someone who didn't know much about it, what would you say?"

Takeda: "Hmmm... Well, in terms of the story, a single pint-sized youth comes face to face with an enormous god, creating some kind of connection. What I had in mind was to find out what kind of story would unfold from that point, contrasting the realms of the micro and the macro. When you actually play the game, you'll find a vast world which you are free to explore at will. On the system side, you'll find it's a game that allows you to experience a host of new things. So I hope players will enjoy themselves as they explore the huge game world, experiencing that contrast between the micro and macro levels."

[...]

Iwata: "And you were able to stay unwaveringly true to that theme, from the moment you first thought that it would be interesting to have people living on the bodies of these god-like giants, right through to the very end."

(Iwata, n.d.)

Dealing with cyborgs, humans-turned-gods and many more physical, tangible transhuman entities for the player to tangle with, *Xenoblade Chronicles* gives a significant presence to these ideas, both thematically in the story and characters that make up the narrative, and literally in the gameplay that the player encounters, and how their player character 'develops' as they progress through the game.



Fig.1 – The 'Bionis' and 'Mechonis', the settings of Xenoblade (xenoblade-chronicles-titans-opening-scene-battle.jpg)

Indeed, the very story of *Xenoblade Chronicles* begins with a tracking shot of the two titans pictured above – the Bionis, a biological titan teeming with natural life, and the Mechonis, a cold, mechanical titan home to countless machines, and these serve as the

framing for the entire plot, save the endgame, where the party travels outside the world altogether. Though fantastic, ideas of the transhuman may seem far removed from this setting – though the titans are an unorthodox setting, it is their origin, learnt toward the middle and end of the story, that reveals a much more interesting truth – that the titans, inhabited by entities known as Zanza (the Bionis) and Meyneth (The Mechonis) were once very much human - and 'human' being distinct from the 'Homs', which are human in all but name. Their origins involve Zanza, once known as 'Klaus', initiating an experiment onboard a space station orbiting Earth, that destroyed 'our' universe, leaving himself, the unnamed woman that would become Meyneth, and the station's administrative AI to continue onto the endless sea of a world that is created – and Zanza and Meyneth are reborn as the titans, while the AI, now known as 'Alvis', exists as another god-like entity that keeps his true origins a secret even from his surviving peers. Already, we see vivid examples of transcendence theory (Graham, 2002), of powerful beings having emerged from human origin, their futures and motives uncertain and perhaps incomprehensible by normal people. That and the result of this change creates 'gods' out of a scientific experiment, reminiscent of how various transhuman thoughts are perceived (Bishop, 2010).



Fig. 2 – The Titans before their transformation and the rebirth of the universe (xenoblade-chronicles-4.jpg)

In addition, though Zanza's creations, the 'Homs', are effectively human, Meyneth's creations on the Mechonis are much more straightforward – no organic life covers her body, but the sole race of near-humans she created, the 'Machina', are extremely long lived, and have an affinity of interacting with their mechanical environments, as well as the 'Mechon', drone AI servants that serve as the primary antagonists of the game, being monstrous in appearance and demeanour – very much reflecting the fears behind the 'sinful' and 'dangerous' 'Artificial Life' Belk and his cohorts discussed (Belk et al, 2020, 6). This is before the greater threat of Zanza is revealed, who wishes only to continue existing at the cost of his own, and Meyneth's, creations. As an imagined posthuman race, the Machina are interesting for being portrayed almost as 'natural' cyborgs for their own biomechanical aesthetics and interaction with technology, yet emerging from something that was also originally human – and are separated from the 'horror' and 'techno-anxiety' (Campbell and Saren, 2010, 153) that the Mechon initially represent in being truly 'human' in their interactions with the main characters, which is more friendly than even the High Entia originally appear to be. Existing as friends of the party, the Machina have interesting discussions around their prolonged life compared to the Homs, which live regular human life spans - one side-story involves finding an item that can either give a millennia-old Machina a peaceful death, or continue their life for another couple of slow decades with another one. Both choices are allowed, and do not affect the main storyline, allowing the player a true choice on where they stand on these issues. Furthermore, the Machina's humanoid gait and demeanour, and almost 'organic' movements despite their mechanical nature, could invoke the 'uncanny' effect in players unfamiliar with them (Spiegel, 2016, 369).



Fig. 3 – A Machina
(Vanea_concept.jpg)



Fig. 4 – One of various Mechon types

(Mechon_M63_Harvester_Unit.jpg)

The drones known as Mechon are initially treated in the plot as a monstrous, nonhuman 'other' in the plot, as they are merely controlled by AI. However, they begin to represent a much darker vision of the trans/posthuman – due to the actions of a rogue Machina named Egil, who seeks to destroy Zanza through extreme ends, decides to bring harm to him through destroying and assimilating his creations, the Homs/High Entia. This results in the creation of the 'Face Mechon' – powerful armoured suits that serve as exoskeletons for Homs that have been painfully converted into cyborgs, themselves heightened in physical ability and sustain themselves purely with water, but can interface with their Mechon suit to become a terror to the creatures of the Bionis, a purposeful perversion of Zanza's creations that horrify Homs, High Entia and Machina alike. Questions of humanity then arise as the party comes into conflict with more of these Face Mechon, and moral quandaries about destroying them appear as both heroic and villainous characters are made into these cyborg creations. With the exception of a certain main character, this process is irreversible as it removes several major organs – the ending does reveal, however, that the technologically advanced High Entia do eventually find a way to re-grow the lost human tissue. Either way, these 'Face Mechon' represent theory around the cyborg that evokes both 'terror and pleasure' (Hayles, 1999, 3) in equal measures – terror for those who defy them, and pleasure for the ones who enjoy their new Mechon bodies.



Fig. 5 – A Face Mechon (Metal Face)

(Metal_Face_art.png)



Fig. 6 – The Homs within (Mumkhar)

(Mumkhar_unique_sight.png)

Indeed, this grim fate is one faced by the major character and playable party member Fiora. Originally a regular Homs from Colony 9, she initially serves as Shulk's love interest before being seemingly killed in a Mechon attack early in the game. However, it is revealed that she survived through being transformed into a Face Mechon pilot, with much of her body being replaced with machinery – and besides that, her body is shared by the Mechonis' Goddess, Meyneth, creating a 'split-personality' effect. Fiora very much seems to represent the mixture of the feminine and the cyborg in her design, though unlike the majority of Meyneth's appearances in the game, she takes a very physically active role, engaging in close combat with her foes after realising what her new body can do, separating her from the other female characters in-game, codifying new ideas from her transhuman identity; ones that embody Haraway's 'cyborg' to the other characters' 'goddesses' (Haraway, 1987). She endures her unwilling status as a transhuman entity for the sake of protecting Shulk and her friends, making her the Face Mechon that retains the most humanity, unlike the other examples; such as fellow

Colony 9 survivor Mumkhar, choosing to abandon their human morals in favour of the power they have gained, though the line is vague as to where the personal ideals before transformation begin.



Fig. 7, Fiora
(Fiorung2.png)



Fig. 8, Mechon Fiora
(Fiora_faced_mechon_1.png)

Gods and mortals aside, one of the defining features of *Xenoblade Chronicles* is its massive virtual world, with impressive scenery and the entities that fill said world – it boasts one of the largest virtual worlds of its kind, and therefore has a great variance in scenery as well, starting with the very opening area, where you play as Dunban, Shulk's mentor who previously wielded the powerful Monado sword before it crippled him – in 'Sword Valley', a fitting setting for the opening of the game and its themes. Sword Valley is the location at which the Mechonis struck the Bionis with its sword (see Fig.1), lodging itself in the Bionis and forming a massive bridge between the two giant bodies. This acts as a fusion of the biological and the mechanical in a literal sense, with ether rivers and plants coiling around the cold valley filled with pulsing lights and Mechon barracks that line the blade, creating an effect similar to various post-

apocalyptic and/or cyber-punk dystopian scenery seen in similar works (Campbell and Saren, 2010, 167) – feeling 'dirty' and 'incomplete'.

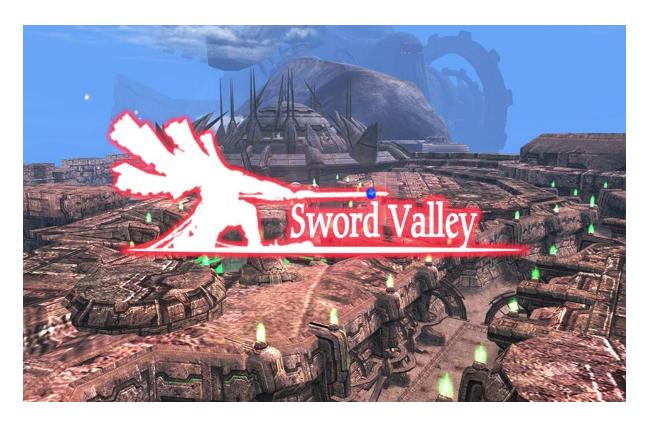


Fig. 9, Sword Valley

(Sword_Valley.png)

The existence of this place as a battlefield in the opening scene serves also to signify the conflict between the Homs and the Mechon, between the human and the machine, and the location itself 'evolves' as the game continues. When the party reaches Sword Valley in pursuit of the antagonist, Egil and in rescue of the mechanised Fiora, it is discovered that this acts as one of the locations in which the Face Mechon are produced and maintained, known as 'Galahad Fortress' – furthermore, the Ether that flows into the area comes from the Bionis' wound, and is used by Egil to produce weapons that disintegrate the biological matter of organic beings, having no effect on beings from Mechonis. However, this eventually serves as the location of a second battle at Sword

Valley, where the formerly neutral people of Bionis, such as the High Entia, all unite to resist the Mechon, with aid from the Machina who oppose Egil. Therefore, it serves as a place of unity as well of conflict between the two titans, between the organic and the machine – a 'cyborg location' which affects the body on a micro and macro scale.



Fig. 10, The Bionis' Leg (Gaur Plains)

(Bionis%27_Leg_Location.jpg)

As for the locations on the Bionis, the majority of them resemble real world landscapes close up, despite the locations being upon a giant titan – these range from the Bionis' Leg, a large grassland, the Eryth Sea, based on the back of the Bionis, to the snow-capped Valak Mountains. However, the sense of difference and that indeed, the player is on the body of a gigantic titan, comes from the humanoid, organic structures that are visible in these locations, especially when viewed from a distance. For instance, the Eryth Sea is based on a plate above the 'wings' of the Bionis, and its head is completely visible from this location. The Bionis' Leg instead has bone-like structure that protrude from the rock and soil, and at one point, the entire body above the knee is, though shrouded in mist, visible. However, the greatest indicator of this is the existence of the *opposite* titan – from this area on the knee (pictured below), the player is treated to the first view of the Mechonis facing them, eyes glowing ominously in the distance, and the

scale and implications of the game world are revealed in a massive spectacle reminiscent of sci-fi film, a bizarre cross between the green utopia (Geraci, 2011) and the mechanical 'dark city' that waits beyond (Kaes, 2010, 17), a nearly apocalyptic image.



Fig. 11, View of the Mechonis from the Bionis' Knee (Tephra Cave)

(Mechonis_Kneecap_Hill.jpg)

That said, the area in which the scale and biological nature of the Bionis is showcased the most in the 'Bionis' Interior', which is visited twice throughout the game – once when the Bionis is 'dead' and inactive, and once after the god Zanza awakens and takes back his body. Indeed, in the former case, it serves as a minor area filled with cell-like creatures, hinting at the former human nature of the Bionis, and very much resembles the interior of a corpse, with cilia lining the walls and floors, and small pools of 'ether', the same blood that Egil had been draining from the Bionis before his eventual defeat. However, the names of the locations passed through also suggest something familiar yet distinctly 'inhuman' about the Bionis and its biology, such as the 'Third Lung' and the 'Vein Crossroad'. Shulk also comments on this fact, and that the Bionis doesn't seem 'dead', but otherwise appears as relatively small and unremarkable area while they chase the Mechon threat. These ideas of entering a large organism, particularly humanoid in shape, are reminiscent of the visceral sci-fi works explored by York

(2016), though in this case the being simply is massive, as opposed to a nanotechnology-fuelled exploration, but the spectacle and effect is much the same.



Fig. 12, The Bionis' Interior (Dead)

(Upper_trachea.jpg)

Indeed, once Zanza does awaken, the Bionis' Interior becomes the primary target for the party, aiming to defeat him from within before he can complete his genocidal goal of reabsorbing all the life on the Bionis, his body. Once inside, the player is faced with a much different image than before – the area has massively opened up, with the size now dwarfing that of some previous areas, and the formerly grey and dead walls and floors now pulse red and glow green; with the imagery of blood and ether creating a visceral and 'human' presence to the area, crowned with the gigantic heart of the Bionis that serves as the party's target, beating loudly and ominously as the party draw close. Furthermore, the dormant life-forms that existed now flourish and are hostile to the party, likely furthering Zanza's desire to stop them, having sunk another location, the Giant-created 'Prison Island', into his body, also fusing technology such as teleportation devices into his body. At this point, the scenery *does* begin to evoke the

effect seen in films where the human body is entered at a microscopic level, and the hostile results of Zanza's body parts evokes ANT and the action of objects that are a part of his body's 'network' (Cerulo, 2009) – to horrific effect – the biological horror here, I argue, is introduced here after the mechanical deliberately to produce this effect, or perhaps to seem even more 'unnatural' to the player's eye.



Fig. 13, The Bionis Interior (Living)

(Bionis%27_Interior_Location.jpg)

Due to the nature of the story, and the party's need to hurry in their climb of the Mechonis before Egil can commit his goal, not much of the Mechonis is explored compared to the Bionis – with the torso (Mechonis Field), chest (Central Factory), and head (Agniratha, Mechonis Core) being the areas visited. However, as the party fall from Sword Valley during a battle against Egil, the player is first introduced to the technology and people of Mechonis through the Fallen Arm – literally, an arm that was severed from the Mechonis during the initial battle between the titans millennia before the story – it serves as an island between the two titans that, like Sword Valley, has a

keen fusion between nature and machine, with grassy fields and wildlife alongside old, damaged Mechon – and is also home to the majority of the Machina race, having fled from Egil's madness. This location too influenced the Machina, who found beauty in their new surroundings, despite many of them having lived for millennia due to their incredible life spans – once again reminiscent of the 'cyber-punk' locations that Campbell and Saren (2010) describe. Interesting also to note is the fact that Egil had the Mechonis' missing arm rebuilt, and healing wounds is something that the Bionis is implied, through its many scars, to not be able to do so easily, despite Zanza's desire for perfect, eternal life.



Fig. 14, the Fallen Arm

(Fallen_Arm_2.jpg)

The climb through the Mechonis, though a quick one, is wrought with massive scenery, creating a pseudo-biological system similar to the Bionis' Interior, but with mechanical

parts instead of organic ones. Beginning with the Mechonis Field and Central Factory areas, both are largely vertical climbs, filled with metal pathways and elevators, while clockwork-esque scenery moves the Mechonis' insides. Notable is that the only 'living' entities within are the Mechon, in great numbers and in more powerful and diverse versions than seen to that point, creating an oppressive feeling of danger while being dwarfed by the massive machines that move the Mechonis; countless bottomless pits line the floors at points, and the party is in full danger of dropping to their deaths at several points. Jade Face, or Gadolt, serves as the 'boss' of the area as well, another Homs turned Face Mechon, though his brainwashing and appearance is far more mechanical than even the others, matching the atmosphere and location of these largest areas of the Mechonis. These locations, then, serve as a mirror to the Bionis' interior, but the effect received appears to be more in line with a colossal factory not unlike the one seen in *Metropolis* (1927), as Kaes (2010) explains as having a similar oppressive atmosphere.



Fig. 15, Mechonis Field

(Mechonis_Field_Location.jpg)



Fig. 16, Central Factory

(Central_Factory_Location.jpg)

As for the gameplay of *Xenoblade Chronicles*, the game is classed as an RPG (Role-Playing Game), and thus has a sense of progression that makes the bodies of the characters more durable, powerful, and more. As per another RPG standard, the player is able to switch the equipment available on their characters, with it being typically divided into light, medium and heavy armour, alongside weapons. These of course provide bonuses to the characters' attack and defence stats as standard, but also can come with specific abilities that boost skills, or sometimes plot-specific functions – for instance, the Monado is capable of harming Mechon enemies, but there are special, Machina-created weapons available on the Fallen Arm that are also capable of doing this, albeit usually at the cost of raw attack power. As such, there is a certain strategy involved in deciding what weaponry and armour is ideal for the situation at hand, often dependant on what area the player is in. Adding to these layers of customisability is the

existence of 'gems', which are items that can be placed into 'slots' in characters' armour and weapons – the number dependant on the piece of equipment itself. Gems being able to be crafted in their own section of gameplay, they can range in terms of effects, increasing attack, defence, ether, speed, evasion; and many other factors. With this, equipment becomes a largely complex system, more so than many other RPGs, and can improve the abilities of the characters far beyond what they would normally be capable of at their 'level'; therefore, these systems can be seen as artificially improving the very characters themselves, even outside the game's heavily transhuman narrative - a point argued by Geraci that I support in this case study (Geraci, 2012a, 742).



Fig. 17 - Equipment Screen

(Xenoblade_Chronicles_069.jpg)

In addition, after the player has completed the game, or rather, defeated Zanza and completed the main plot, the player has the option to begin a 'New Game+', another feature that has become common in recent games, though the exact parameters of the feature tend to vary from game to game. In *Xenoblade*, however, you have the option to carry over a set number of items, gems, and equipment, in order to give you options on

how powerful you want to be on the next run through the game – you are even allowed

to keep your level, should you for example wish to simply focus on completing all of

the side quests, while the combat would be relatively easy due to your level. That, and

Shulk is allowed to keep the 'Monado III', the strongest of his weapons that otherwise

is only available during the last phase of the battle with Zanza, which is a powerful

boon indeed returning to the very beginning of the game, giving you a 'powerful body'

to work through the game again with on a return journey.

Therefore, with all of the above considered, *Xenoblade* deals with these bodily concepts

of the trans/posthuman in very interesting ways - with the narrative very much

showcasing the wild ideas of Bostrom and those who believe in a truly fantastical

trans/posthuman future, and both of its sides, to boot. On the side of horror, you have

the Mechon and the suffering of 'humans' at the hands of AI, cyborgs, and a race of

machine-born people, as well as the humans-turned-gods and their gigantic mortal

bodies; but there is also a more clean, 'positive' change in the redemption of the

Machina people after Egil's defeat, and the existence of Fiora, the 'good' cyborg.

3.3: Xenoblade Chronicles X: Cold Storage

Yokota: "This is sort of off topic, but we put a lot of meaning into the "X" in the

game's title. The "X," as you know, is a symbol for an unknown factor."

Iwata: "As in the "X" used in mathematics."

(Iwata, n.d.)

Moving to a harder Sci-Fi setting, Xenoblade Chronicles X continues to deal with

foreign concepts of the body in extreme and transhuman situations, but this time

includes even more factors, largely those stemming from the overall plot, which sees a

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humanity on the verge of extinction, fleeing to another Earth-like planet in order to survive – but in doing so, they end up interacting with all kinds of new technologies, and alien life.



Fig. 18 – The amnesiac player (Cross) after emerging from a stasis pod

These ideas begin immediately after the opening cutscene showcasing Earth's last stand, with the player character and 'avatar' 'Cross' awakening from a stasis pod, which was part of the necessary preparations made for a long journey through space to find planet Mira, which would be able to host human life. The player character, in reflection of the player's new experience, suffers from amnesia and is weakened from their time in cryostasis, taking some time to recover and acclimatise to their new surroundings – and these changes quickly become apparent. Bizarrely, the characters

make note of the fact that despite their wild differences, all of the species present on Mira are capable of speaking perfectly fluent English (or whatever language the player has selected; *Xenoblade X* is multilingual) – the NPC character Elma, who leads the player's cohort, theorises that the planet itself is somehow alive and responsible for this, altering the minds of the humans, aliens, and indigenous species present; this means that simply by existing on Mira, humanity's abilities have been 'changed' (Bostrom, 2005, et al), and by another, celestial-scale body.

However, during one early skirmish against Ganglion forces, hell bent on, for reasons unknown at the time, locating and destroying every piece of the Lifehold on Mira (which contains the biodata of humanity and other Earth animals), the player ends up making a heroic dive against a shot from an enemy machine in order to save one of their alien allies – what follows next changes the dynamic of the game narrative completely. Upon inspecting the damage, the player character finds their arm completely destroyed, but rather than flesh and blood, the arm is instead mechanical, and leaking a kind of translucent fluid, leaking to give a bizarre effect of a 'human machine'. As the player is taken home to New LA and the 'repair centre', the stand in for a hospital, they are told the truth by Elma about humanity's situation; that currently, every living human currently live in posthuman constructs known as 'mimeosomes', their biological bodies contained within the Lifehold's main unit, lost somewhere on Mira. Mimeosomes are android bodies controlled by the brainwaves of their real bodies in the Lifehold, and are built to mimic human bodies perfectly, hence their name – they have all the physiological aspects of the body, and can eat, drink – everything bar bearing children is possible. The citizens of new LA all know this fact, and live relatively normal lives despite their new existence as a cybernetic, 'posthuman' entity (Sullins, 2000, et al), and NPCs have varying opinions on their transformation, some seeing it as fantastic, not wishing to go back to their real bodies, and some are horrified. Regardless, though they cannot age, which was considered in the original decision to make the change, as it was 'useless' if they died searching for a new planet, they can be destroyed if enough damage is done, rendering a person 'dead' until their real body would be found – ironically, the initial presentation of cryonics mirrors the reasons for this radical change that scholars such as Moen (2015) envision.



Fig. 19, Cross discovers the truth about their body

(Cross Wounded.jpg)

This creates an interesting situation where their 'posthuman', out-of-body existence is built around being as 'human' as possible, while also having additional transhuman layers on top of this – many citizens of New LA have trained to use 'Skells' – robotic exoskeletons controlled intricately by their 'human' pilots using a futuristic interface that seems to work directly from their Mimeosome bodies' motions, suggesting a deeper connection. Regardless, these Skells enhance the abilities of their pilots greatly, with powerful armour and weapons that can combat alien forces efficiently. In fact, these Skells were in fact created due to the fact that their enemies, including the Ganglion, have access to the same type of machines, so the Skells were hastily created in the last days of Earth in order to give humanity a fighting chance. With a fusion of androids of human origin and exoskeletons based on alien technology, a definitively transhuman effect is created, being something so far removed from the usual human experience –and altogether creates the 'uncanny' effect similar to the Face Mechon of the previous game (Campbell and Saren, 2010)



Fig. 20, Various Skells
(Skells.jpg)

However, as the race to stop the antagonistic Ganglion aliens and their leader, Grandmaster Luxaar continues, they steal an advanced alien Skell known as the 'Vita' with the help of their allied races and a human spy for the Ganglion, which apparently holds a great deal of power for them. However, around this time, the player and their party learns form Elma the truth about a 'clock' that appears on the top of BLADE's HQ, which is constantly counting down. This truth is that it is a countdown towards the energy source of the Lifehold powering down, killing all inside and severing the connection to the mimeosomes, and which point they would cease functioning as well. This adds a sense of urgency to the narrative and a very 'mortal' reality to these otherwise ideal-seeming posthuman bodies, in which age and disease are but a memory. As such, a good number of the humans do wish to return and live their lives in their original human bodies, suggesting that this existence is not as favourable as it might seem, that it creates some sort of longing due to the knowledge that these bodies, though having every ability a human has, is not 'truly' human or even immortal, which mirrors the discussions of some theorists (Lee, 2016, et al).

Late in the narrative, the party is betrayed by Lao, one of the squad member characters who supports the player's team, having suffered a breakdown after learning the truth about the Lifehold; that in fact, it doesn't contain any human bodies at all, having just been a myth spread by the failing Earth government in its last days, In actuality, all that the Lifehold contains are the brain patterns of the people 'chosen' to board the arks that managed to escape Earth, having been 'uploaded' into the Lifehold's mainframe sometime prior to the Earth's evacuation (Sullings, 2000), and is now losing power, hence the mimeosomes' problem of 'mortality'.



Fig. 21, The Lifehold
(lifehold.jpg)

The final act of the game sees the Lifehold core explored, having indeed landed far from their home base, New LA (Los Angeles), in Mira's uncharted oceans. Unfortunately, Luxaar and the Ganglion have also located it, leading to a great battle above the Lifehold, which has activated its automatic defences, including shielding and weapons. The party enters the Lifehold while the people of New LA hold off the enemy. Before Elma and the party can assess the status of the Lifehold, however, a

deranged Luxaar breaks into it using his powerful 'Vita' Skell and begins ranting about a 'prophecy' involving humanity destroying the Ganglion, and the 'Samaarians' as he attacks the party. After his defeat, Elma finds that the main function of the Lifehold is still available – to create new human bodies to transfer their consciousnesses into using DNA patterns stored from Earth, the Lifehold containing both samples and the data for every species alive on Earth before its destruction; we see here the potential of a 'return' to the human body, as well as the 'mass production' capability of not only the human body, but that of every animal that existed on the now dead Earth.



Fig. 22, Luxaar's Vita
(Vita.png)

Before these developments can be further questioned, however, Luxaar suddenly strikes, having survived his defeat, but is stabbed in the back by Lao, who blames Luxaar above all for the death of the Earth, and his family, the Ganglion having fought over Earth to begin with. However, the two proceed to break through the glass floor and into the protoplasm that makes up the Lifehold interior, causing a grotesque transformation into a monster made up of Lao's bio-mechanical body, as well as that of

Luxaar and many other species from Earth, a true embodiment of the 'monstrous' transhuman, both mechanical and organic in origin (Campbell and Saren, 2010). Begging the party to kill him, Lao states that he cannot control this body's violent impulses, and the party reluctantly obliges. As he dies, Lao reveals what he learnt during his time as the Ganglion's ally - the source of Luxaar and the Ganglion's hatred, being able to read his memories. The Samaarians, predecessors to humanity and the Ganglion who disappeared long ago, actually genetically engineered both races themselves, making humanity itself a creation that would be considered 'posthuman' from the Samaarian perspective, as well as always having had 'artificial' bodies.



Fig. 23, Lao

(Lao.jpg)



Fig. 24, Lao transformed

(Lao Transformed.jpg)

Like *Xenoblade Chronicles* before it, *Xenoblade X* boasts yet another massive game world, which is open for complete exploration by the player at a very early stage, beating out even its predecessor in sheer size. This time, however, though Mira is implied to perhaps be a sentient world and thus a celestial 'body', the game does not take place on the backs of two gigantic posthuman entities, but rather on a 'regular' planet, albeit with wildly varying biomes. Largely, all of the biomes have a different kind of setting, the first, Primordia, being a grassy, mountainous biome; Noctilum, a massive jungle; Oblivia, a desert; Sylvalum, a white, fungal forest; and Cauldros, the volcanic location of the Ganglion base. In this instance, then, it's more ideal to showcase the areas that are relevant to the trans/posthuman themes of the game.

As mentioned above, the Lifehold Core acts as a repository for the DNA of all life on Earth, and formerly contained the stored consciousnesses of all the humans chosen to board the White Whale, ready to be uploaded into new copies of their original bodies once their mission was complete – the Core is therefore a textbook example of mind uploading and transcendence, given the eventual perseverance of the human

consciousnesses despite the Core's damage. It represents a grotesque vision of genetic alteration after the mutation of Lao, as well as the creation of various 'Chimeras' that are made from the genetic material of various Earth animals, and potentially contain human DNA as well, creating a similarly grotesque image of the 'posthuman' to counter the mimeosomes. Ultimately, its destruction leaves an unknown amount of Earth's DNA samples forever lost, and millions of uploaded people have effectively died, leaving only the thousands who live on Mira currently, with the mimeosomes previously thought to be revivable also permanently gone, showcasing the fragility of these perfect-seeming bio-mechanical bodies, and the defiance of the common 'immortality' tropes that circle these ideologies (Bostrom, 2003; Geraci, 2011; et al).



Fig. 25, a Chimera
(Soldier_Chimera.png)

Though there are less narrative based examples of outright trans/posthuman elements in the story of Xenoblade X, the gameplay more than makes up for that, which can be divided between two distinct sections, offline gameplay, and online gameplay, where the player is networked with countless others in real time. To begin, *Xenoblade X* shares the RPG genre with its predecessor, and though there are many similarities, *Xenoblade* X also boasts its own share of interesting, original mechanics. As before, the game boasts a massive world, exceeding even that of its predecessor. When it comes to exploring the game world, 'landmarks' and 'secret areas' exist just as they did before; and grant bonuses for exploring them. However, Xenoblade X adds a further incentive for exploring – Miranium. Unlike the previous game, you cannot simply warp to every significant area you visit – instead, Miranium mining points serve as warp points instead, and the player acquires the material over time upon unearthing new points, with the amount increasing as time passes. The material itself is used for developing much of the fantastic technology seen in the game, making this game mechanic tie together with the posthuman narrative of the game, creating a real sense of 'ludonarrative', of the merging of narrative and gameplay (Nitsche, 2008, et al).



Fig. 26, a Miranium Deposit
(XCX_img_field03_02.png)



Fig. 27, the Skell Menu

(FMXAOFz.jpg)

When it comes to armour and equipment in-game, these are restricted to whatever class Cross/the other characters happen to be, but their function and diversity are much the same as in *Xenoblade Chronicles*; there are various types, ranging from light to heavy, and have 'augments' in place of gems, likely implying technological augments to the bodies of the mimeosomes as well as the armour/weapon itself. However, a new feature can be found in the customisation and selection of Skells, the robotic exoskeletons that the characters in-game can use. Skells themselves range from light to heavy types, and much like the characters, can be outfitted with augments, armour and extra weapons, which provide 'battle arts' for them. Furthermore, Skells can be equipped with a 'flight pack' at a late point in the game, which opens up the game world massively as, with a limited amount of fuel, the player is unrestricted vertically, and can reach areas that were impossible before that point. In addition, Skells allow the players to defeat large enemies that would be impossible to defeat with their mimeosome bodies; creating a sense of empowerment even beyond the mechanical bodies they already inhabit (Geraci, 2012b).

3.4: EX_MACHINA: Bluebook's Chamber

"Well, I think probably where we are at the moment is in a slightly difficult stage, because I think we're not entirely sure what our relationship with technology is, and we're not comfortable with it. I suspect that's why there's a bunch of narratives around at the moment which kind of pry that anxiety out."

(Garland, 2015)

Dealing with humans and their relations with AI constructs, *EX_MACHINA* shows Alex Garland's look into the difference between the two types of bodies, and what this means for interactions between the characters; Caleb, a coder for the technology corporation 'Bluebook', receives a company email telling him he has won a competition for a trip to an undisclosed location for a secret reward. We next see him travelling in a helicopter, the pilot flying over forests and mountains (all apparently owned by the CEO) before dropping Caleb off near a river, telling him to follow it as he is 'not allowed' to get any closer to the building. There, he finds a bizarre cabin that hosts an AI voice, which grants him a key card which allows him access into an elaborate, expensive-looking living area. It is at this point he meets Nathan Bateman, CEO of Bluebook, training in an outdoor gym. After exchanging pleasantries, he quickly shows Caleb around his facility before presenting him with an extensive non-disclosure agreement – after he signs it, Caleb is told of his real reason for being here – performing the Turing Test (to see if an AI can pass without being noticed as a machine) on an AI Nathan has created. (Turing, 1950, 460).



Fig. 28, Nathan's Complex (Complex.jpg)



Fig. 29, Caleb meets Ava in the test-room (Meeting.jpg)

Soon after his arrival and meeting with Nathan, Caleb soon finds himself in the test chamber, while Nathan retreats to his room to observe the interactions via his PC and is soon brought face to face with Ava – the AI Nathan promised, complete with a decidedly mechanical body, but recognisably human face. Awkwardly, the two begin to talk, Caleb clearly taken aback at the speech capabilities she displays, and relays this to Nathan after they share their brief conversation. At this point, Caleb describes that Nathan's creations are amazing and that he almost seems like a 'god', which is misquoted by Nathan to seem more egocentric, which seems to mirror ideas of the affluent, mad scientist put forward by Narkunas (2014, 2) through his analysis of Margaret Atwood's MaddAddam trilogy – Caleb begins to become slightly irritated at Nathan, but is nonetheless impressed, retiring to his room, where we see he has extensive scarring on his back, foreshadowing for his later dilemma. In bed, he discovers that the TV in his room displays security footage of Ava's room, and watches her briefly before a power outage occurs, sealing him in his room until it ends. Disturbed, he seeks out a phone before realising he's entered Nathan's room, where the drunk inventor reminds him of the NDA he signed, while coming into contact with Kyoko, Nathan's servant, for the first time.

At dinner, Caleb shares a meal with Nathan which is served by Kyoko. However, when Kyoko accidentally spills wine on Caleb, Nathan suddenly snaps at her, callously degrading her before dismissing her - calming himself, Nathan asks if anything 'unusual' happened during the power cut that stopped him from viewing the test chamber for a few moments, and Caleb lies that nothing did, as a depressed looking Kyoko sits outside their room. In contrast to that scene, Caleb retires to his room and watches Ava on the screen, who appears to look back at the camera fondly, as if knowing he is watching. The following morning, Nathan shows Caleb exactly how he creates his AI and robots, in a very sterile laboratory. The AI are created in a 'wetware' CPU that can change and expand as a real human brain can, Nathan stating that he 'needed to get away from circuits' in order to achieve 'true AI', and also states that getting them to mimic human expressions was especially difficult until he managed to use his own company, Bluebook, to hack the mobile phones of the world to gain massive, free amounts of data – showcasing the impact on networked technology on his creations, as well as the advanced bodies that Nathan has created for his AI. (Bryant, 2011, 20).



Fig. 30, the clothed Ava (Clothed.jpg)

In their third session, Ava shows art she has created to Caleb, paintings of trees, causing Caleb to ask what Ava would do if she 'went outside'. She is seen to ponder this, before answering that she would go to an intersection in a busy city, so that she could study 'human life' en masse. After this, she asks Caleb to close his eyes, before she returns moments later fully clothed and wearing a wig, appearing convincingly human bar the nape of her neck, which is still skinless and transparent, evoking an uncanny feeling perhaps even more than before – regardless, Caleb is taken aback once more, especially when Ava proceeds to ask if he is attracted to her, making him feel uncomfortable, which Ava notes before apologising. Afterwards, Caleb angrily confronts Nathan, asking why Ava was given 'sexuality'. Nathan counters by stating that sexuality is central to 'humanity' and 'intelligence' and confuses Caleb further when stating that they can even have sexual intercourse due to an intentional design feature, and 'enjoy it'. Nathan dismisses Caleb's worries as his 'insecurity talking, not his intellect', and Caleb is clearly shaken by the implications, as Kyoko silently listens to their conversation – the scene evokes Ornella's ideas on robots, technological development,

and sexuality, as he states that 'in narratives about "the world to come" as they can be found in various literary genres, trans- and posthumanism, or imaginations of technoscientists of what one day might be possible, sexuality and pleasure, often take on a prominent role' (Ornella, 2010, 318).



Fig. 31, Nathan's past files

(Past Files.jpg)

Beginning to grow suspicious of Nathan's activities, a determined Caleb encourages Nathan to drink himself into a stupor before stealing his key card, allowing him access to his workstation, and there he finds a disturbing collection of footage based on past AI constructs, hidden in files named 'JADE', 'JASMINE', 'LILY' and so on, with another folder named 'DEUS_EX_MACHINA', in reference to the film title and the meaning the 'god in the machine' (Geraci, 2010, et al). Here, we see AIs, some with incomplete bodies treated like no more than toys, being dragged around, abused, and effectively tortured, as footage of Jade's tests show her screaming for release, before wearing her arms away to nothing trying to escape the test chamber. Shaken by this, Caleb rushes to Nathan's room, finding the old robotic bodies holed up in closets as a naked Kyoko watches, a scene reminiscent of Bluebeard's chamber – before Kyoko reveals herself as an AI wordlessly by peeling her synthetic skin off, further disturbing Caleb, who returns Nathan's key card as he fumbles around upstairs, still drunk. Returning to his

room, Caleb begins to break down, wondering if his body is even human, going so far as cutting himself to reveal that he does bleed; unlike the AI constructs.



Fig. 32, Kyoko reveals herself
(Kyoko.jpg)

Eventually being tricked by Caleb and Ava and watching the security systems be disabled, Nathan panics, and knocks Caleb unconscious with a single punch as he goes out to confront Ava, who is standing by Kyoko. Ava asks if he will let her go, to which Nathan declines, telling her to 'get back to her room'. Suddenly, Ava dives at Nathan, pinning him down but is quickly overpowered, losing an arm to Nathan's improvised weapon, showcasing that though they are advanced, the bodies are, likely by design, fragile and easy to break should something like this occur. However, Nathan doesn't account for Kyoko's betrayal, who stabs Nathan in the back, causing him to react in shock, breaking Kyoko's jaw in a single hit, causing her to seemingly 'die'. However, Ava then finishes Nathan off with another stab to the stomach, causing him to walk off in disbelief before bleeding out and dying, Ava stealing his key card — we see completed here the common AI rebellion trope seen in various sci-fi works and AI theories (Zeng, 2015, 3). As Caleb begins to wake up, Ava outfits herself with various synthetic skin parts from the other inactive robots stuck in Nathan's macabre 'Bluebeard'-esque closets, perfecting a human appearance at last. However, to keep her

secret, she abandons Caleb to die in the sealed complex, and takes the helicopter meant for him to civilisation, where she is last seen walking amongst a human intersection, just as she had dreamed earlier, looking no different in appearance than the people there.



Fig. 33, Ava in Nathan's room
(Ava Room.jpg)



Fig. 34, Ava in the outside world

(Ava Outside.jpg)

Thinking briefly outside the narrative, the AI characters of course have their own unique characteristics, and their bodily differences from the other main characters help define their representation and place in the story. For instance, as arguably the central character of the plot, Ava is just one in a series of AI created by Nathan in an attempt to create a machine that could go above and beyond the 'Turing Test'. Created using 'wetware' technology, her mechanical body contains a gel-like substance that mimics the actions of the human brain, and can grow and shift – making her vastly different from standard AI, the advanced technology supposedly being capable of causing a 'singularity' (Hughes, 2012, 764), as mentioned by Nathan himself. Otherwise, outwardly she appears uncanny due to her exposed glass casing and mechanics, despite an obviously female form. This however is circumvented when she puts on clothes and a wig, which makes her appear indistinguishable from a human, except for an exposed glass neck area. Furthermore, she was explicitly designed by Nathan to appeal to Caleb's sexuality, basing her outward appearance on Caleb's pornography history similarly to real-life practices (Ornella, 2010, 318), open knowledge to the CEO of the most used search engine on the planet, making her gendering not only intentional, but also used as a tool to manipulate Caleb.



Fig. 35, the 'closets'

(Closets.jpg)

As far as settings go, the location of Nathan's complex possesses a duality of light and dark, and 'progress' and 'horror' are also seen in Nathan's personal workplaces and room, which are naturally off limits to Caleb for the most part. The rooms seem innocuous at first, but gradually become more macabre in hindsight. First, the room where Nathan constructs his robots is host to hundreds of dismembered and scattered body parts, from arms, and torsos, to the wetware 'brains' that make up their minds. Furthermore, there are separated mechanisms that manage facial expressions that match up to the synthetic skin the AIs use, creating a shiny and clean, yet macabre and 'uncanny' aesthetic, that can be taken in equal measures of awe and horror (Hartouni, 2008, 313). However, this becomes increasingly sinister upon Caleb's exploration of the otherwise innocuous room that Nathan sleeps in – containing his personal computer and a few closets. The room acts as a 'Bluebeard's chamber' of sorts, as the closets contain dismembered and naked AIs, strung up like corpses with wide open eyes, perfectly preserved. The PC, on the other hand, contains recordings of the torturous sessions Nathan has had with the incomplete AIs, both in body and mind – one being entirely faceless. Together, this creates an incredibly dark atmosphere, and causes Caleb to fully decide to escape alongside Ava, who also knows of the true terror behind Nathan's kind demeanour.

Aside from its story and characters, one other defining feature of *EX_MACHINA* are its impressive visual effects and how they are used to create this convincing posthuman effect, as seen in the screenshots provided, but even they don't quite do the effects justice without motion. Particular focus here goes to the creation of the AI constructs, both alive and 'dead', as well as the other effects that enhance the film's narrative, as well as help portray the complex ideas within.



Fig. 36, Ava while 'naked'

(Ava Default.jpg)

Naturally, the centrepiece of the show are the AI constructs, which are shown in meticulous detail thanks to modern CGI. Even when fully formed, the AIs immediately qualify as 'uncanny' due to their 'incomplete' nature; albeit a 'clean' incompletion, averting the usual 'dirty' technology that is often associated with primitive and experimental AI and robots (Campbell and Saren, 2010, 167), perhaps reflecting at their true nature as advanced AI. Without synthetic skin, various areas of their bodies are covered with a grey-white material resembling rubber, where many of the joints and

other areas are left open with glass casing, allowing the viewer to see the mechanics within, resembling a watch with a view to its clockwork. To add to this aesthetic, Ava notably makes a faint 'whirring' sound as she moves during the early scenes of the film, making her already awkward movements seem even more unnatural. That said, the AIs usually have a layer of synthetic skin which is easily captured through simply using the actresses who play the AIs, lessening this effect; however, during the scene where Kyoko reveals herself as an AI to Caleb, she peels away the skin from her face, creating a 'body horror' style visual not uncommon to the horror genre and some other sci-fi films (Cornea, 2011, 231), which, combined with the inert and incomplete models hooked up in Nathan's closets, causes Caleb's breakdown, which is portrayed with technological lines and visual glitches to show his anxiety at possibly being an AI, as well as foreshadowing his being watched through Nathan's hidden cameras. In addition, their 'skinless' state is treated visually as nakedness throughout the film, both to Caleb and perhaps to Kyoko as well, something even exploited by Nathan in-universe – perhaps hinting at their true nature as something 'inhuman'.

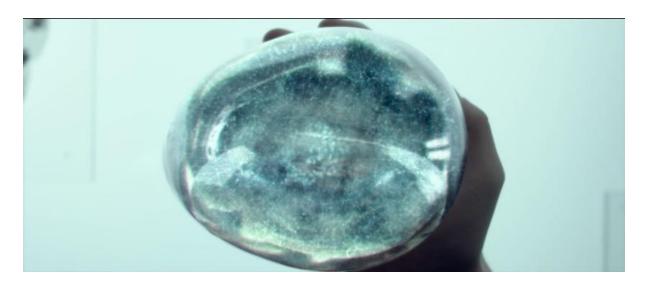


Fig. 37, The Wetware Brain
(Brain.jpg)

During the scene where Nathan explains how he created the AIs and developed them to the advanced level seen in the film, he shows Caleb the 'wetware' brain that serves as the core for the AIs, describing the blue, gel-like fluid that allows it to develop similarly to a human brain. Here, we see a zoom-in shot into the wetware brain, where we see the 'nodes' change and shift, creating a bizarre effect; the 'living' nature of the gel and its presentation as something as 'alive' as the human brain is visual evidence of their advanced nature and status as a 'posthuman' being with consciousness, yet its disembodiment from any sort of body or even skull creates an almost horrific effect, that it is alive without any sort of body, being entirely alien to existing life. This, coupled with the disembodied faces and body parts that Nathan has in his development lab creates a 'clean' variant of the aesthetic seen in works such as adaptations of *Frankenstein*, of the mad scientist's lab.



Fig. 38, Ava 'redresses'

(Dress.jpg)

A scene that follows shortly after, namely the scene where Ava, having found freedom but is understandably reluctant to enter the human world showing off her mechanical parts, finds Nathan's closets containing the inert shells of her predecessors, and proceeds to put them to use in placing a new limb and synthetic skin and hair on herself to gain a 'normal' appearance. The mechanical nature of the limb reattachment is plain to see, and the skin placement precise and 'clean'; most interesting, however, is that the form that Ava chooses is utterly different from the one that she showed Caleb in order

to gain his trust and attraction – the body type and hair she uses are entirely different, and gives a more feminine air than the boyish appearance she used previously. Now with a complete human appearance, she defies the uncanny effect that defined her up to this point, and would be able to integrate into human society reasonably well provided she is not discovered, but that is outside the realm of the film; ultimately, her transformation into something that looks perfectly human, but is not - is one definite embodiment of the 'posthuman'.

3.5: Interviews/Discussion: The Wondrous Body

This section is dedicated to the results of the fieldwork undertaken in 2017, in which I interviewed 34 people in order to discuss ideas of trans/posthumanism, and how they relate to various media examples, as well as their implications for a potential future for the world and humanity, in order to gauge opinions on these ideas. As such, this subsection will discuss the ideas of the 'body' and 'change' that they answered with – what immediately springs to mind in popular culture, and whether any changes would necessarily be positive ones.

For instance, when bringing up the term 'transhumanism' to people, even without explaining its particular sub-categories, the vast majority (n=26) of people I had interviewed had heard the term, or at least said sub-categories (such as cybernetics, genetic mods, etc.) prior to the interview, and gave their own interesting interpretations on what it meant to be 'posthuman';

"Okay, so I have heard of the concept before, and it's the – where do you start with it – the idea of – what, like, expanding human potential beyond its current levels? Like, on a physical level it's stuff like – there's a lot of crossover with cybernetics sort of stuff, you know, augmentation and in the long term, there's

stuff involving stuff like uploading someone's mind to a computer, or an AI singularity event sort of topic right, that's related?"

(Respondent 14)

Here, we see that the above respondent is immediately familiar with and reminded of some of the key tenets of trans/posthuman body modification as described in the above sections; with reference to basic physical changes such as cybernetics and prosthetic augmentation (Clark, 2004; Park, 2014; et al), as well as immediate discussion of the more abstract and difficult concepts such as mind uploading (Sullins, 2000) and even the 'singularity' (Geraci, 2010, et al), showcasing an incredible level of cultural osmosis, that this many topics immediately spring to mind from one respondent alone.

"Ah, to think of transhumanism, posthumanism as like... after the point where we are now like fully integrating computer stuff with, I guess, biological stuff, which is what I think of when I think posthuman, transhumanism, I usually think of, because that's where we're moving now and so transhumanism, postwhatever, makes me think we're at that point – is what the phrase means to me."

(Respondent 31)

Specifically, however, as seen above, most respondents that I interviewed had a particular fixation on the mixture of man and machine, which also falls in line with Sullins' idea of the 'alluring' technology that the computer embodies (Sullins, 2000, 13) – and how its ability to be a mental prosthetic is something recognisable and desired by many people today. Furthermore, this repeated lip-service to body modification seems to appeal to the visceral and somewhat morbid curiosity with 'body hacking', the 'self-made cyborgs' that Duarte and Park (2014) mention being an example;

"Well, I would say that that would be more like man sort of integrating with machines, possibly their relationship with machines — so I go with — this example would be cyborgs in a lot of media, I think a good example of that one in particular would be possibly the main character of *I*, *Robot*, whose arm is sort of like — sort of like a robot arm, but you don't find that out until the end, roughly."

(Respondent 24)

Which naturally brings us to another topic which was often discussed in my interviews; that of prosthetics. As Park (2004) discussed, as common implants such as the hearing aid become widespread, the definition of a 'cyborg' becomes the realm of something beyond science-fiction, and I believe my respondents recognise that – as with the 'body hackers' mentioned above and in Park's work (ibid, 304), robotic arms are becoming more common, and this is an easily recognisable symbol of the 'real cyborg', of something that was transferred from the screen to reality.

So, as seen above, there is indeed a variation in the fluency and specific details people go into when describing their own account of trans/posthumanism – that said, all of them are by no means inaccurate, and have a certain focus – for instance, even in the three samples above, cybernetics, and the cyborg are given an explicit mention, and this is repeated in many more of the 26 positive answers to being asked about the term. This alone shows the spread of the term and ideas within the dedicated SF/video game fandom, and the third above quotation shows the exact reason for this spread of ideas – the media that represents it, of which the last 30 years has been rife with. For instance, when questioning the respondents about media examples, the series *Deus Ex*, which deals heavily with the idea of having a cybernetic body and the implications thereof, came up multiple times (n=9), being instantly recognisable as a 'simulator' for this kind of experience;

'Another example that would actually be the *Deus Ex* series [...] For example, *Human Revolution*, the main character that there has like completely retrofitted

with cybernetic parts, as a result of an explosion, basically most of his limbs have been replaced, like with his eyes, vision there.'

(Respondent 24)

The next most discussed media work was *Ghost in the Shell*, a franchise starting off with the titular Japanese animated film (1995) directed by Mamoru Oshii, which became one of the first truly popular anime feature films in the west – the visuals and themes having stuck with the consciousness of people who watched it over the past two decades. *Ghost in the Shell* follows the cybernetic 'security-agent' Motoko Kusanagi (or the Major), who fights futuristic and often posthuman criminals while inhabiting a purely prosthetic body herself – eventually coming into contact with a sentient AI who desires a parallel to transhumanism – to gain a body, using any means to obtain one. Dealing with themes of cybernetics and transcendence, it certainly seems to have stuck with many (n=8) of my respondents;

"The first one that came to mind is *Ghost in the Shell*, but that's purely because it's something I've watched recently [...] I watched the original movie and I watched the English version, that came out, which sort of took a different interpretation on the original, where she was once human, but got kidnapped and her brain was put in a robot basically, and her memories wiped or something like that?"

(Respondent 6)

Interestingly, the franchise and its facets are so well known that both quotes (above and below) discuss the original 1995 film and its differences to the 2017 remake starring Scarlett Johansson – the former having the Major having always been in a robotic body, and the latter having been a regular Japanese woman until being mortally injured, having been given an aesthetically Caucasian robotic body after the fact. In any case, the franchise resonates heavily with fans, its themes clearly being memorable;

"I did also just think about *Ghost in the Shell*, not the Scarlett Johannsson film, the actual anime and manga – that's another big point on transhumanism, because – well, I mean it's the 'ghost in the machine', and everybody on Earth has a 'cyber-brain' and stuff like that, you know..."

(Respondent 19)

Later, when discussing the potential applications these theories and ideas would have on the real world, there was very much a mixture between those who foresaw a 'positive' or a 'negative' world, based on societal conditions, power dynamics, and more. That said, for this section, I'd like to focus on the potential advocates for a positive change, namely in the advancement of medicine and therapy with which to heal and change bodies for the better, especially in regard to prosthetics (n=14);

"I think even with today, advancements in the Human Genome Project and things like that, there's a very real possibility that we'll be able to wean out things like, Huntington's disease and genetic disorders that are you know, shortening lifespans and children before they're even born, that sort of thing..."

(Respondent 5)

"Hmm... I mean, the first thought is obviously the medical things? It's that – people who are disabled, or are physically limited, from their conditions or became physically limited with those conditions."

(Respondent 29)

Here, we see that through discussion of the HGP and other foundations, that respondents are aware, at least in part, of the potential use of genetic storage and modification for potential positive applications, as discussed by Glover (2006) and

many others featured in the earlier sections on the topic, focusing more on the medical potential, and the wild possibilities of enhancing our lives as a whole rather than the ethical dilemmas involved with altering the human genome.

"... my area now, telomeres, is intrinsically linked to both cancer and with aging, so it probably will be something to do with telomeres if they ever do, do something with helping – prolonging life, all that sort of thing, but telomeres will almost certainly be involved, so I'll certainly be interested to see that in the future."

(Respondent 14)

The above type of respondent was rarer than I would've liked, but it was interesting to see them regardless – that of someone truly invested in the field of genetics as a student, who works much closer to these developing sciences – said respondent indeed linked their interest in this form of transhumanism to their own scientific interest and work, and remained certain that despite the worries about unethical use of the science, the future would be bright due to diligent checks already put in place and developing.

There are many more examples like the above to choose from – however, it's plain to see that this use is the primary one in mind for people who want to see this kind of idea develop. That said, as a secondary example, there are some who see an alternative (and concurrent) use for these developments – that of labour use, professional, military, and otherwise (n=6). Though not as prominent, the idea certainly appeared to be popular;

"Well, from what I've heard, this sort of stuff is starting to happen a little bit? It's like we're on the kinda tip of the iceberg of it already? Some of the technology has happened from what I do remember reading here and there and seeing? So, from this it really depends, it can benefit – it would probably benefit – maybe the soldiers and war veterans who end up losing limbs, it may end up saving their life?"

(Respondent 17)

In addition to the previous discussion about prosthetics, the above respondent brings up the point that there are the obvious military applications for that technology due to the dangers of combat, but for other types of technology as well – this could include the drone hardware mentioned by Cerulo (2009), which can act as a sort of full-body prosthetic for a soldier, who remains relatively safe while the drone can perform both reconnaissance and combat.

"Well physically it would actually benefit a lot of people who are disabled, you know like – I work a lot at a physical job at UPS, and we have to bend down a lot, pick up heavy packages, but if people had like cyborg, you know, enhancements, then we wouldn't have to work- [cuts off] [...] you know it's funny actually, we've been talking a lot about how machines replace men, in physical labour like that, but it's kinda like meeting a middle ground..."

(Respondent 28)

Here, the above respondent discusses their previous conversations with co-workers at UPS, a job which requires repetitive manual labour, and the delicate balance between using technology to enhance the worker or the worker's vehicles, and simply outright having automation replace the worker entirely which could even be extended to considering what rights to work 'enhanced humans' could have in a future where it becomes more widespread, which Fukuyama (2004) discusses when considering the potential of transforming the human race. This also resonates heavily with Foucault's work (1991), as changing the body to suit capitalist needs echoes Foucault's 'biopolitical' ideas.

3.6: Conclusion

To conclude, what we see here are some vastly varying ideas on the representations and ideas the human body and its potential changes are given, particularly in regard to cybernetics, and even entirely new bodies in the case of *EX_MACHINA* – in the film, we see how powerful, and also how threatened, the creator of new, cybernetic bodies can be, especially when said bodies are governed by unstable and imperfect minds such as AI – very much mirroring the minds of humanity, perhaps – we also see the horrific conditions that creating, storing and even abusing these bodies can result in, and the fact that these 'robots' are always, and intentionally, women, brings forth disturbing power relations that will be discussed further in the section on 'Power'.

In the case of *Xenoblade Chronicles*, we see changes to the body on a truly cosmic scale, from two humans to two entire 'worlds' and 'gods', as well as on a more common sci-fi scale; with humans (homs) becoming cyborgs, with it being portrayed in both beautiful and horrific ways, and granting wildly different abilities, a reflection of the varied gameplay the game also provides, with the characters themselves being heavily 'customisable'. In the spiritual sequel *Xenoblade Chronicles X*, this gameplay trend continues, with the player avatar perhaps being even more customisable, but the narrative and visuals instead deal with *every* character being in an unfamiliar and mechanised body, and the ideas of cryostasis and genetic alteration featuring prominently in the story, culminating with monstrous transformations alongside graceful bio-mechanoids, and even aliens taking human form.

As for my interviewees, I found that their quick discussions on the cyborg, the machine and the idea of 'leaving' the body were fascinating, and there was a definite positivity when it came to the base of 'change' itself, motives and availability notwithstanding, to be covered in the later chapters — instead, there was a focus on a hope for medical advancement and longer-living, healthier bodies, as well as cyborgs more suited for making work easier and more comfortable. As such, I've found that there is definitely a great interest in a 'change' for our human bodies, and the next chapter will be focused

on what comes next – once the body has been changed, oftentimes permanently, what does that mean for our 'identity'?

Chapter 4: Identity

4.1: Introduction

In this chapter, I will be discussing the second major theme – that of 'identity', what results when change, often in the body, but sometimes that of major societal change brought about by trans/posthumanism, resulting often in fictional character and real speculators wondering if they would still be 'human' after such a change – and where that places us next to new, embodied technologies such as AI and other potentially self-aware systems. Once again, looking at the case studies and interviews I have conducted, this section should showcase the various dilemmas and difficulties when constructing all kinds of identities when dealing with the most radical of changes.

4.2: Xenoblade Chronicles: 'You're not Invincible!'

Takahashi: "Not in so many words, but we did discuss something similar very early on. The hero in this game is Shulk, and we made one of our themes that he should be 'a hero who isn't hated'.

Iwata: "Could you tell me specifically how you set out to achieve that?"

Takahashi: "It's something I've felt about my own games, of course, as well as games by other people. Essentially, the heroes and heroines in RPGs often end up being disliked. Naturally, there are well-loved characters too, but I'd say that in general, they end up being hated. I think it comes from the huge emotional investment the player has made in the hero or heroine."

(Iwata, n.d.)

As discussed in the previous chapter, *Xenoblade Chronicles* deals heavily with change, both physical and metaphysical, and how the characters react to these changes is central in creating their identities, and defines where they stand and how they wish to deal with

the transhuman future unfolding right before their eyes, and by the end, their decisions would impact the entire world they lived in.

Having established the world as a truly transhuman one, and the narrative following discussions and questions on what is human in this strange world, and what is not, it follows that the characters should also bring up similar ideas and questions, existing in a world where they, unknowingly at first, are humans (or Homs) born of a god himself born of a human, with humanoid entities spanning the land alongside advanced machines and technology. Needless to say, the ways in which these central figures, many of which are controlled by the player, interact with these ideas and environments serve to enhance this narrative and explore the opinions and beliefs people have with said ideas.

It seems prudent, then, to begin with the main character himself; Shulk. An 18-year-old Homs living in Colony 9 (located on the Bionis' thigh), Shulk initially appears as a very positive youth who, despite the constant threat of Mechon attack, keeps a positive outlook on technology; he regularly salvaged destroyed Mechon parts and other technology to create new weapons, armour, and other gadgets with the help of his friend Reyn. He also is the sole wielder of the Monado sword, and soon realises the symbiotic nature it has with him, connecting him not only to the sword itself, but also to Zanza, who becomes aware of his existence as he continues to wield the sword. However, with Shulk, he also inherits Zanza's power of precognition, being granted the power to see future events, and therefore having the potential to change them. Initially, Shulk is frightened and repulsed by this power, but as he learns of its potential use, he accepts his role as being 'more than human' and uses the Monado in order to save his friends and other allies on multiple occasions. He fills the role of the 'audience surrogate', but the developers wanted to make sure he had his own persona in this strange world;

Takahashi: "Right. Player characters are a part of yourself, and for this reason, they shouldn't think or do anything that you don't want them to. With RPGs, there is one way to ensure the hero isn't hated – and that's to make it so they don't utter a word."

Iwata: "If they don't say anything, the player is less likely to feel alienated from them."

Takahashi: "That's right. Not making the main character say anything is easy, but for this title, we wanted him to speak. This meant we were groping for a way to get that 'resonance'. In the end, I think we managed to achieve that to some degree."

(Iwata, n.d.)



Fig. 39 – Shulk

(Monadoboi.png)

However, this is not the only change that Shulk becomes aware of. As the game progresses, the Mechon threat is eventually removed, making way for Zanza to take the central role as villain – vacating Shulk's body in the process. This reveals that Shulk was killed as a child along with an expedition group that found the dormant Monado, and lives only because Zanza allowed it, feeding Shulk his own life force; making him even more decidedly 'inhuman'. Horrified by this upon being saved by the Machina's technology, Shulk begins to question his own sense of identity, having lived side-byside with an insane entity for several years when he should have died some time ago as his family did. This comes to a head when Zanza is finally destroyed, and Shulk is posed a question by the AI Alvis, who has revealed his role as the 'True Monado' – if he would like to become a god in Zanza and Meyneth's place, and remake the world to his liking, be it a peaceful one or otherwise. Faced with the question of transcendence and absolute power, Shulk recalls the damage that Zanza did with said power time and again, and ultimately rejects the offer, preferring for no gods to exist at all, and for the races of the Bionis and Mechonis to live in peace – though he does make a request to Alvis for the world to return to the infinitely expanding universe that has existed before Klaus' accident, and for this universe to be filled with life. Thus, Shulk rejects godhood, but uses that authority momentarily to make the world a better place, ending his story arc as he muses on this new world. Therefore, the character's knowledge of his own abilities, yet refusal to portray himself as 'above' his fellow Homs, cements him as a posthuman who does not embody the common fears of transhuman thinkers (Pordzik, 2012, et al).



Fig. 40 – Zanza

(Zanza.png)

With Shulk explained, it seems logical to move onto his antithesis, and the ultimate antagonist of the game – Zanza. As mentioned in the previous chapter, his transition from human to titan/god marked a massive change in his life, as well as that of the entire universe, being reduced to a sea on which his titanic body and the Mechonis stand – possibly representative of his restrictive and small-minded human personality, similar to Hyeck (2011)'s views on familiarity in SF stories. Otherwise, Zanza embodies everything that Shulk does not, with one exception; namely, as Zanza mentions before the final battle, and as do Alvis and Shulk after his defeat, Zanza originally spawned life modelled after humans and other animals largely because he was lonely, and 'had a desire for friendship' – Shulk initially rebukes him for simply seeing them as sources of food for him to sustain himself, but later concedes that their motivations may have originally not been so different, and convinces Shulk to use his act as 'god' for a positive change. However, most of his other characteristics and uses of power are not quite so idealistic. This are the subject of the worst nightmares of humanists (Badley, 2018, 424), that our parasitic and destructive nature will increase with our power, and Zanza embodies this theory.



Fig. 41- Zanza inhabiting Arglas, the Giant
(Zanza_Arglas.jpg)

As seen above, Zanza's ascent to godhood led to him losing his humanity, in more ways than one. As mentioned above, the immortality he so desired was not complete, and led to him reabsorbing his creations every so often in order to sustain himself, not wishing to die like he would have as a regular human – this drive being a common idea (and also criticism of) those who would become 'posthuman' (Bostrom, 2003, 38). Furthermore, Zanza could also inhabit the bodies of others, even hijacking them in a way that completely overrode their personalities – though he merely remained dormant in Shulk's, he entirely possessed the body of Arglas, a giant who was once the Machina Egil's friend until Zanza used Arglas' body to wage war on the Mechonis, seeking further power through taking Meyneth's Monado, the source of her own power leading in turn to Egil seeking revenge on Zanza and his creations. Therefore, Zanza represents many of the negative fears surrounding the posthuman – a power-seeking entity that would subjugate those who cannot or do not have said power – and this also reflects in his appearance. Though imposing as Arglas in his body, Zanza usually appears as a sinister reflection of Shulk, looking very similar to him (and even sharing the same voice actor to complete the effect, Adam Howden). However, upon claiming Meyneth's Monado and transforming to face the heroes in the final battle, Zanza takes on a horrific form resembling a mixture of the Bionis and Mechonis, a perverse fusion

of the biological and mechanical that also invokes fears about the trans/posthuman (Spiegel, 2016), and can be seen below. Indeed, Zanza's monstrous nature embodies Lorrimar (2018) and others' fears that indeed, depending on one's own internal morality, transhumanism could result in monstrous effects – and Zanza is a clear example of a 'human-born monster'. Ultimately, Zanza represents the 'fear' to Shulk's 'hope' when it comes to the trans/posthuman (Pordzik, 2012), and their actions and appearances cement this.



Fig.42 – Zanza's merged form
(Zanza_final_concept.jpg)

Meyneth, the God of the Mechonis, is the entity who the villainous Egil wished to emulate, but later turned against when she disagreed with his methods – the former human turned mechanical goddess that evokes a strange mixture of Haraway's goddess/cyborg duality (Haraway, 1987, 37). She is a goddess in the literal and feminine sense, being capable of creating life and acting as a kind, motherly figure to her creations – but also exists as a titanic, powerful machine that could have destroyed the other titan on a whim were she so inclined. Her refusal to do so, however, separates her from the biological Zanza, who has very little 'humanity' left after his transformation. However, like Zanza, she does use the bodies of others as hosts, albeit for benevolent purposes – she uses the body of the character Fiora, after her transformation into a Mechon cyborg during which Egil's sister, Vanea, secretly implants Meyneth's Monado into her chest (see Fig. 12). Meyneth acts as a guide to Fiora and her friends, only overriding her personality when absolutely necessary.



Fig. 43, Meyneth

(515px-Meinasu_-_Xenoblade_Chronicles.png)

This comes to a head in the direct interaction between the two gods at the beginning of the narrative's final act. Meyneth, after helping bring Egil to his senses, attempts to fight Zanza using Fiora's body, but is defeated, and in order to stall him, sacrifices her own body in order to save the party, ending her own immortal existence for the sake of what Zanza would consider 'lesser beings' that would be no more than 'food'. It is at this point that the player learns that these 'gods', despite their parasitic immortality, still have 'bodies' that can be destroyed, including Zanza. Therefore, the depiction of transcendence here is not one of complete removal of the physical form – their mortality, gendered appearances, and creation of life all indicate that despite their transformation into the extreme posthuman entities that Bostrom and others envision (Bostrom, 2003, etc.), their human roots are clear, though their sense of human morality differs greatly. However, it is made clear that, through Shulk's actions and that of the party, that a 'world without gods' is what they prefer, leading to an 'unrestricted' world without these potentially terrifying entities.



Fig. 44, Meyneth and Zanza

(maxresdefault.jpg)

Despite the advantages Fiora gains from her merging with Meyneth, they clearly make her begin to question whether this truly was a positive change. After Meyneth's death, Fiora's body is running on limited energy by that point. Without constant maintenance, the Face Mechon cannot survive for very long, and Meyneth stood in for that energy. As such, Fiora begins questioning her mortality against that of Shulk's, and resolves to fight to the end regardless, despite her anxieties over her own body and Shulk's known resentment of the Mechon as a result of her 'death' – and later that of other deaths that the Mechon cause. As stated before, she is eventually allowed to regain her biological body, rejecting the changes that Egil had imposed upon her, choosing the possibility of a 'normal' relationship with Shulk and the others over the advantages her Mechon body may have had, though these advantages were growing thin with that body's decline. Her situation is also key to the development of Shulk and the party's opinions of these changes, as having spent ample time with her in Mechon form, the reappearance of mass-produced Face Mechon later is greeted with gratitude by Shulk, as they save the party from Zanza's monsters in their final appearance on-screen. Thus, Fiora is instrumental in the transformation from the transhuman beings in Xenoblade from being seen as 'monstrous' (Campbell and Saren, 2010) to something as 'human' as the humans themselves – the writers here use both their appearance and their personal struggles with relationships and survival simultaneously to produce this effect.

As for the locations in the world, aside from the bodily ones mentioned in the previous chapter, there are those that more reflect on the posthuman identity of the inhabitants of the game's world – such as the elf-like High Entia. Though the technology of the Homs is quite low level, near the head of the Bionis lies Alcamoth, the High Entia city. In this setting, the High Entia have knowledge of genetics and technology far beyond that of the Homs, and this reflects in Alcamoth itself – it appears as a floating, glowing, white city (something shared amongst all High Entia structures) that almost resembles a space-ship in appearance, mirroring a classic sci-fi aesthetic. Their transportation resembles flying jets in the air and buses below and is constantly regarded by the party members to be something almost fantastical and incomprehensible, a view that the High Entia are divided on. As such, some High Entia see themselves as superior to Homs,

and others instead sympathise with them. Regardless, the city and their people were mythical and seen as 'religious nonsense' by many Homs. However, after Zanza transforms the pure-bred High Entia into the monstrous Telethia, the city becomes a place of horror – desolate and cold, as genetically altered monsters roam above to kill all other forms of life. Ultimately, Alcamoth represents a near-posthuman future, with recognisably human inhabitants, though with extended lifespans and enhanced technology, something reminiscent of the ideal future envisioned by many trans/posthuman theorists (Bostrom, 2003; Edgar, 2009; et al), while its destruction evokes the perceived dangers of genetic alteration, albeit in an extreme fashion (Glover, 2006, et al).



Fig. 45, Alcamoth

(Alcamoth_Location.jpg)

Alternatively, on the head of Mechonis, is the similarly styled Mechonis Core, being home to the capital city of Mechonis, Agniratha, the initial base of operations for Egil and his Face Mechon plan. Depicted in flashbacks as a bustling place where the Machina socialised, worked and developed early Mechon drones as unarmed helper

drones, the current Agniratha has, by the time of the party's visit, deteriorated, a vivid rusted reddish-brown encompassing the entire area, as the bodies of Telethia from Zanza's first attack millennia ago litter the streets, and yet more hostile Mechon patrol the collapsing structures that make up the former living quarters of the Machina, before they fled to the Fallen Arm. Despite this desolate, dystopian environment, it is possible to receive quests, but they are from mechanical terminals and are presented much more as orders that might be given to AI or machines rather than to a living person. The Meyneth Shrine also exists, where the goddess is worshipped in perhaps the most human-seeming display in the city, and evokes ideas brought forward by Geraci (2011), of the link between the transhuman and religion. It also serves as a counterpoint to the final area of Mechonis, the Core, which acts as a terminal through which Egil begins his 'transcendence' to control Mechonis, featuring a grand terminal and mechanical interface. Despite the initial portrayal of the Mechonis as a home of monsters and a futuristic nightmare, this display of religious imagery and the evidence of what was once a great society led by a single madman showcases well the fragile potential transhumanism has, and the duality of the 'primitive' Homs against the 'futuristic' Machina.



Fig. 46, Agniratha

(Agniratha_Location.jpg)

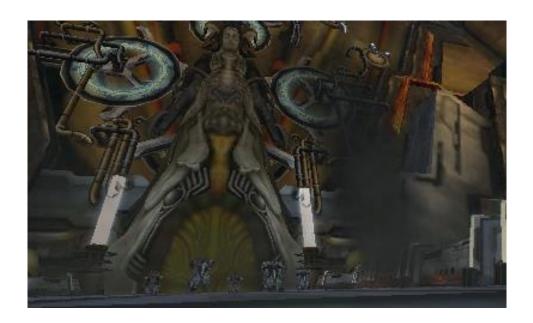


Fig. 47, Meyneth Shrine

(Meyneth_Shrine.jpg)

Finally, after the party defeats Zanza's disciples on Bionis, they are granted access into Zanza's 'world', where Zanza is confident that they will meet their end. Unlike any other location in the game, 'Memory Space' serves at the endpoint physically and metaphorically, as this world very much evokes the idea of 'transcendence'. To describe it as quickly as possible, this area is merely a long pathway, made of light that takes the party through a cosmic background that slowly reveals itself to be the 'real' solar system – with Mercury, Jupiter, and eventually, the Moon and Earth visible. At this point, Zanza's true origins are unknown, so this serves as an area utterly alien to the protagonists, yet familiar to both Zanza and the player (Chaffey, 2013, 86), and creates a sense of 'ending' as the player enters the final area, a multicoloured cascade of moving lights known as the 'Sentient Genesis'. This serves as the final battlefield, and the name and visuals truly give a sense of Zanza's 'transcendence', as his own memory

has created this replica of his home universe, long since destroyed – and this world-creation itself can be seen as a transhuman pursuit (Hayles, 1999, 23).



Fig. 48 - Memory Space
(Space.jpg)



Fig. 49 - Sentient Genesis

(XC-Sentient-Genesis.png)

Finally, this area serves as a counterpoint to the game world as seen in the ending, after Shulk rejects godhood and asks Alvis to create a world with no boundaries, like the one that had come before, Alvis makes good on this promise, and the Bionis and the remains of the Mechonis are destroyed, and the world left behind is implied to be something far more similar to Earth, albeit with the head of the Bionis still visible and buried. This world is also created out of the party's desires, such as with the new concept of saltwater to them as they go fishing in the sea for the first time. Finally, Alvis makes it quite clear that alien life does exist in this new universe, and that he is confident that they will work together to improve it. Ultimately, while Zanza and Meyneth's world, based on their own posthuman bodies could be a paradise, this world, ruled by no entity, is presented as having a greater amount of 'freedom', without some great entity to govern them. Therefore, a world is established where the diversity and identity of these people are protected regardless of their level of enhancement or technology, similar to the ideal world Fukuyama (2004) envisions.



(xenoblade-chronicles-5.jpg)

4.3: Xenoblade Chronicles X: A Humanity Removed

Takahashi: "That's true. (laughs) So this time, we created two major pillars, open world and robots, and built various content based on these concepts. The open-world concept was a high hurdle to overcome, but I believe figuring out how to make both human characters and robots coexist and function in this world was another hard challenge we faced."

(Iwata, n.d.)



Fig. 51 – Battle over Earth

(XCXplot001.png)

Xenoblade Chronicles X opens the story in a similarly dark fashion to that of the original Xenoblade Chronicles, when a voice-over speaks over the above scene of the planet Earth being ravaged and then ultimately destroyed when caught in the crossfire between two warring alien races – one known as the 'Ganglion', the other unknown, but also having no qualms about tearing the Earth apart in their side of the struggle. Ultimately, world leaders were informed that the situation was hopeless, as the warring races had weapons far above anything on Earth, the year of its destruction being 2054. As such, they began an 'Earthlife Colonization Project - Project Exodus', where interstellar 'arks' were launched from every major city on the planet, in an attempt to ensure mankind's survival – some were destroyed in the attempt, but a few made it off world and away from the alien conflict, just as Earth was wiped from existence. The plot follows the story of the survivors on the White Whale, which after continued chase from the Ganglion horde, crash landed on the planet Mira two years after fleeing Earth, with the White Whale being established as 'New Los Angeles', or 'New LA'. Already, we see the common posthuman sci-fi setting of the post-apocalypse, combined with a habitable, primal alien world, all fused together with futuristic technology (Geraci, 2011: 145).



Fig. 52, BLADE HQ, New LA

(New LA.jpg)

Here, we learn that the surviving humans on New LA have formed 'BLADE' (Builders of the Legacy After the Destruction of Earth [ENG]/ "Beyond the Logos Artificial Destiny Emancipator [JP]), an organisation dedicated to surveying their new home of Mira, from landscape to flora and fauna. However, it is soon learnt that BLADE has a much more important and pressing purpose – to discover a piece of the White Whale that contains the largest number of human survivors, the 'Lifehold', as to preserve as much of the human race as possible. The player character, having joined BLADE, engages in various missions with their new allies, encountering evidence of both current and ancient alien civilisation as they survey Mira. Eventually, this brings the player into contact with friendly, indigenous alien races, as well as violent and antagonistic ones, the latter under the umbrella of the Ganglion, having tracked humanity to Mira.



Fig. 53, A Ganglion Soldier

(Troops.jpg)

After the revelations in the Lifehold mentioned in the previous chapter, that Human DNA was stored in the Lifehold, and that their Mimeosome bodies were only meant to

be temporary, one optional party member, Doug (if he is present during the event), notes that this is an ethically unsound idea, and brings up the common transhuman dilemma of transferring consciousness; if either the mimeosome that he is, or the human he could become again, are the same as what he was back on Earth. Here then, we see familiar moral struggles in the story of playing with genetics (Annas et al, 2002), as well as characters questioning if they are still the same person as they were are biological humans (Lee, 2016; Spiegel, 2016; et al). Troubling especially is the idea that the Mimeosomes and prospective 'new bodies' aren't you, but only 'copies', leaving the original human to die. In addition, human DNA apparently can act as a 'weapon' against the Ganglion, acting as a failsafe if the latter ever betrayed the Samaarians, giving humanity a twisted 'purpose' in their creation. This serves as a strange reversal of the usual 'human colonisation' trope in SF (Grewell, 2001), where in this instance, humanity was manufactured as a direct result of *another* species' colonisation of the universe.



Fig. 54, Elma's true form

(1430334178-1430330482261.png)

After the villain Luxaar's death alongside the traitorous Lao, the Ganglion flee Mira altogether, humanity having survived their ordeal, and the party alone knowing the true reason behind their animosity. Regardless, having found the Lifehold's main unit to be functional, Elma decides to make one final revelation, that there is in fact one body that was truly put into cryostasis on the White Whale – her own. Activating the pod, Elma's mimeosome body drops dead on the spot, and from her pod stands a humanoid alien, with purple skin, crystalline hair and a face resembling her mimeosome. She then proceeds to explain the reason why, despite *Xenoblade X* being set in a relative near future, humanity had the technology to built interstellar arks, the Skells, and more; she and her race provided it, seeking to save humanity from the impending war, notifying the governments of the world of the danger while also creating a 'singularity' (Abrams, 2007) that would propel humanity quickly into a posthuman future. However, the ending of the game provides two further mysteries that bring into question the 'human' status of those on Mira; firstly, upon reaching the databanks, Elma finds that it had been damaged and flooded upon impact, with the human consciousnesses wiped, leaving it a mystery as to how their mimeosomes are still active, while rendering those who died in the hopes of being reawakened permanently dead; Elma theorises that alongside the translation mystery, Mira itself may be responsible somehow. Furthermore, Lao, who had been mutated and killed, awakens in his 'human' form on an unknown beach, wordlessly confronted by a hooded figure before the narrative cuts to black, perhaps implying a form of transcendence has somehow occurred, evoking a bizarre, almost religious scene (Geraci, 2011, Torrance, 2019).

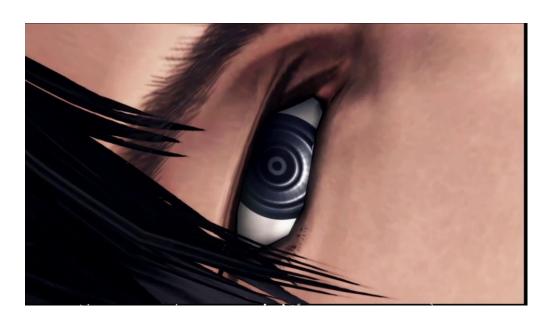


Fig. 55, Final scene, Lao awakens
(IzyiD1Z.jpg)



Fig. 56, Cross (One of many potential appearances)

 $(tumblr_nyspsqJ33y1s55i8ao1_1280.jpg)$

However, there are other characters that have a heavy impact on the themes of identity in this game, and perhaps the most central of these is the 'titular' character of Cross (though this name can be customised to the player's liking). Initially awoken during the early stages of BLADE's planet-wide search for the Lifehold, Cross very much represents the player's own thoughts and feelings on the world, suitable of an 'avatar' – no memory, and no expectations. Their role as a character is one that the player controls and makes decisions through, their personality entirely dependent on what the players chooses on a situational basis – in fact, their character is considered the secondary protagonist to Elma, who drives the main plot, making this a rare example of a player character not being the protagonist. As such, their character is very flexible. The player can present Cross as being very kind, altruistic, and accepting; or at worst, sociopathic, xenophobic and ill-tempered, but ultimately still plays their role as the saviour of Mira alongside Elma and Lin, their partners in BLADE. A large departure from Shulk's role as a very integrated protagonist, Cross exists as a vessel for the player's role in a world much larger and more dangerous than it first appears (Sullins, 2000, et al).



Fig. 57, Mimeosome Maintenance Centre

(Mimeosome Centre.jpg)

However, it is upon the revelation that Cross, along with all of the humans on Mira, have been given mimeosome bodies to inhabit that the character begins to display their own reactions to the various transhuman situations they have been faced with. When their arm is destroyed by a Skell attack, their reaction to seeing the mechanical insides of their body is one of definite horror and disbelief, though the reassurance of Lin and company ease this somewhat. After this, Cross' reactions and personal feelings on the status of 'humanity' are left to the player's discretion, though their actions in the canonical plot suggest that whatever their personal feelings, they are determined to save humanity, or whatever it has become, at any cost. Most interestingly of all, however, is that given the knowledge that the Lifehold Core was destroyed upon the landing of the White Whale, Cross' amnesia can be attributed to the fact that they were 'born' without a prior consciousness from Earth, as none existed, fitting to their role as a blank slate. Ultimately, the source of their consciousness can assumedly be considered a 'new' one, born from non-human parts, which makes Cross a true 'object with agency', as theorised in new materialist theory (Ferrando, 2013; Schandorf and Karatzogianni, 2014).



Fig. 58, the 'Class Tree'

(Classes.png)

In addition, as a development of the 'Skill Tree' system from the previous game, in which one could customise the various player characters' attributes and equipment draws, this game instead uses a 'Class' system that is reminiscent of older RPGs, which allows one to gain a select set of skills and abilities as long as one remains in that class. However, this system has been combined with the previous one to form a 'Class Tree' of sorts. Classes have different specialties, such as health, attack or defence, and mastering more basic classes allows one to keep the weapon mastery from said class, while dropping that class' 'battle arts' or 'skills' as you move on to higher levels of classes; after achieving the highest rank of 10. Again, this very much fits with the theme of the game, of the player character Cross as a 'blank slate', being able to be customised in every way possible, while the other characters are fixed to their class of preference, reflecting their status as set characters.



Fig. 59, Elma (Mimeosome)

(Elma.jpg)

Complimentary to Cross' enigmatic existence and place as a self-insert character, Elma, a high-ranking member of BLADE, serves as the *de facto* protagonist of the game, driving the plot forward through her own actions, as a traditional RPG protagonist would. Much like Cross, she appears to have a great desire to rescue humanity from their entrapment, and is very knowledgeable about the topics that Cross and even Lin have no idea about, such as the state of humanity, the Lifehold's true nature, and displays a very positive attitude towards transhumanism, as she sees it as the only way to ensure humanity's survival. Of course, Elma's own existence is even more complex — as stated above, her true form is that of a humanoid alien, who until that point had been posing as a 29-year-old woman, though this can be inferred to mean the 29 years she spent *as* human. This creates an interesting scenario of a posthuman being that, similar to an AI construct, is a non-human, intelligent being that takes on human form, or one very close to it through the mimeosomes, and has successfully integrated into humanity for decades - a definite aversion to the 'anthropocentric' futures that some theorists have claimed is possible (Alaimo, 2012; Somerville, 2016; et al)

However, this is not where Elma's unique relationship with humanity ends. As the game draws to its conclusion, we also learn that Elma is responsible for, 30 years before the current storyline, warning the leaders of Earth about the impending alien invasion, and the likely destruction of Earth as a result. In addition to this, she also provided humanity with high technology, enough to create stasis pods, the interstellar 'arks', mimeosomes and Skells. From this, we can infer that she and her race not only already had great knowledge of technologies that we consider 'transhuman', she also was, for whatever reason, responsible for a 'singularity' on this fictional version of Earth, the technology of which improved massively and quickly in the last 30 years of its existence – this idea being one discussed heavily amongst many trans/posthuman theorists (Bostrom, 2005a; Hughes, 2012). By the end of the story, it remains a mystery

on where Elma originated, but her attitudes towards transhuman ideas seem to be highly positive, at least from an outside perspective – though her long existence as 'human' may throw her 'outsider' role into question.



Fig. 60, New LA in Primordia

(New_Los_Angeles.jpg)

Returning to the setting of New LA; the fact that it is based on an alien world, surrounded by indigenous life forms and bizarre sceneries, implies a posthuman existence from the get go – suddenly, humans can speak to the life forms, and the new materials, such as the fictional 'Miranium', create another breakthrough in technology. Divided into four sections separating the Administrative, Commercial, Industrial and Residential districts, New LA very much resembles a functional human city from Earth on the surface, walled off from the hostile lands around them and with all the amenities to keep people happy, mirroring the idea of the 'tele-odyssey' in SF (Chaffey, 2013). However, with the current and ultimately permanent status of humanity as a posthuman race, there are key differences, such as a centre to replace mimeosome parts instead of a

traditional hospital, and Skell hangars dotted around the city. Though humanity is doing its very best to mimic its past lifestyle, their manner of existence has changed entirely, such as the complete lack of children in the city, and the 'uncanny' effect of this and the constant presence of mimeosomes, is noted both by players and NPCs alike, which is accentuated by the graphics the game uses to display these things (Campbell and Saren, 2010).



Fig. 61, New LA interior

(New_Los_Angeles_Downtown.jpg)

Next, I'll be talking through the online features of the game, which allow players to connect, in one manner or another, through this massive world. Though I have experienced at least some of the online features *Xenoblade X* has to offer, I have prepared a unique interviewee, Chris, to help. Chris has been an active member of the

online community of the game roughly since its inception and has provided insight into how the community interacts with the features of the game, and beyond. First, then, it would be prudent to begin with how the game's connected features work.



Fig. 62, Cross customisation screen

(Cross Customisation.jpg)

At its base, it can be said that the creation of the main character is central to how the online features work in *Xenoblade X*, with Chris stating that this is the 'main appeal' that is central to its fanbase, both in the game and outside. As stated, the character of 'Cross' is entirely customisable, with an in-game reasoning that they are a mimeosome creation, and even after the initial creation, players can still change their avatar's hair colour, skin colour and even gender, creating a sense of true freedom that various scholars have discussed (Cross, 2013, et al). In addition, further customisation is available in the Japanese version of the game, with the western releases altered to not include extra features such as body type and breast size for women, for instance; Chris noted that a minor modding scene emerged around this concept, with patches made to

make these features available to non-Japanese players, though modding proved difficult due to the certain way the game is coded, so though a few engaged in this, it didn't become a central part of the *Xenoblade X* community. Instead, the character of Cross took off regardless, and it was how different players interacted that really popularised the online features.



Fig. 63, Multiple Crosses Online

(Img_online03_03.jpg)

To this end, players gather in lobbies in NLA, with 4 players able to connect at any given time. Here, players can interact and chat with each other, with this location being their starting point. From here, the team of Crosses can then engage in 'missions', in which they players team up to complete a certain objective, such as defeating a powerful enemy. After this, they are returned to the lobby, having received certain rewards that can help in the main game. In addition, players can also take part in larger 'global missions' to take on incredibly powerful boss monsters (Nemeses), though this

does not require the player to team up with other Crosses, but the scores are all tallied together at the end. Chris has noted that reception of the online features have not been overwhelmingly positive in the community, often feeling 'tacked on' to the sprawling offline world that *Xenoblade X* boasts – indeed, there is no free-roaming aspects to the game as there are with MMORPGs, for instance, where players can explore a massive world together. The players can interact in this virtual world, but it is limited compared to the massive offline experience, therefore may break the sense of 'immersion' that a virtual world that could be considered 'transhuman' would have.

"...the more multiplayer online missions you do, you'll unlock this thing called a 'Global Nemesis', which is like an online boss [...] So that's where most of the people play the multiplayer aspect of Xenoblade Chronicles X, in general, because that is where it's less restrictive with joining the online multiplayer – a lot more than just doing the squad missions and doing some random squad missions in general."

(Special Respondent)



Fig. 64, a Nemesis

(Telethia_Plume.jpg)

However, this sense of community does not end with the game itself, and extends into the realm of user-created content, a topic discussed by various scholars as the sign of a strong fanbase. Chris has discussed various elements to this, and regularly posts screenshots or images related to this on social media platforms such as Twitter. Once again, Chris states that the character and avatar of 'Cross' sits at the centre of this idea, as due to the ability for a player to insert their own self easily into them, this extends to user-created content as well; fan-fiction, and fan art (including Doujinshi sold on the market in Japan) tend to follow customised stories set around Cross, as the base story is open enough that it serves as a template, a virtual world through which a would-be writer or artist can form their own creations, and post them in various places online. Chris emphasised this capacity for 'role playing' in the community, and the customisable nature of the party, as well as numerous optional characters that did not receive much characterisation in-game, led to many stories being created. We concurred that this is particularly popular in the west, where these ideas of role-playing are more popular, particularly online where the Doujinshi community cannot exist, due to various factors such as copyright laws (Chen, 2012) – resulting in an active community more visible in the game itself.

"...for user-created content, I would say because of the diverse ability to create your own avatar, people were able to create their own roleplaying aspects within their own community, so they're like 'oh, if my character was in this situation, he would not do this, he would not tolerate that', or 'this character, my character would really like Elma', and another character would not like her, or another character would really, really enjoy being with her – because one of the few things in the game that does pretty well is that when you start building relationships with certain characters in the game, you'll unlock an extra mission, that lets you learn more about that specific character a little bit more in-depth."

(Special Respondent)

4.4: EX_MACHINA: Do Androids Dream?

With ideas of advanced AI designed to pass the Turing Test, and the dynamics between their creator and the unwitting test subject he brought along for the ride, and the struggles these characters have with their identities, *EX_MACHINA* is rife with ideas to explore around who is and isn't a 'good human being'.



Fig. 65, AVA: SESSION 2

(Session 2.jpg)

After his initial meeting with Eva, discussed in the previous chapter, Caleb is approached by Nathan before he enters the second session; he asks Caleb to ignore the technical jargon and theory, since he does enough of it anyway, and states 'I want simple answers to simple questions [...] how does she feel about you?'. In the test chamber, Ava shows Caleb abstract art that she has drawn, to which Caleb questions her on why she does not draw 'objects', or 'people', and that it should be 'her decision', alluding to ideas of truly 'free' AI (Sullins, 2000, 19). In retort, Ava then claims that to build their friendship, she should ask about Caleb, and questions him on his life before coming to Nathan, eventually asking about his marital status and love life, before Caleb deflects the question, talking about the loss of his family, and the programming skills that he believes allowed him to win Nathan's competition. At this moment, however, a power cut occurs, and Ava's behaviour suddenly changes – she tells Caleb that Nathan is 'not his friend', and that he should not be trusted, before returning to her calm demeanour as soon as the lights return, ending the session.



Fig. 66, the power cut

(Power Cut.jpg)



Fig. 67, Ava dreams of 'outside'

(Outside.jpg)

This streak of self-awareness becomes more apparent as the sessions between Ava and Caleb continue; in the fourth session, Caleb talks philosophy with Ava, this time about the 'grey room' that a computer might inhabit, not seeing the real outside world, and the human mind being truly able to 'go outside' and 'feel' – this strikes a chord with Ava, who intently listens, imagining herself outside Nathan's complex in an almost spiritual experience (Geraci, 2010, 1004), and behind the watching Nathan, Kyoko also overhears their conversation. Suddenly, another power cut begins, and Caleb asks Ava if it's possible that Nathan could still see or hear them even while the main power is out, to which Ava claims it's unlikely, as she is causing the power cuts herself, using her own body's power flow to cancel it out, removing all surveillance. Later that day, on a hiking trip, Caleb asks if the contest was fake, which Nathan confirms, it was simply a cover up since Caleb was specifically selected for his skills in his company, Nathan being selectively duplicitous at this point. Soon after, Caleb sees a disturbing scene on the CCTV – one of Nathan arriving in Ava's room and tearing up her artwork, which is a picture of Caleb's face. Caleb moves to confront Nathan, but the latter is clearly drunk, and ignores his questions. After Nathan passes out, Caleb sees Nathan's workstation unguarded, and with footage of Ava displayed.



Fig. 68, Nathan's workstation

(Workstation.jpg)

Trapped in a complex where the edge of a breakthrough that could change the world forever is extremely close, the characters of *EX_MACHINA* all evoke these changing ideas of identity and status, including the 'protagonist', Caleb.



Fig. 69, Caleb

(Caleb.jpg)

The first character we're introduced to in the story, Caleb acts as the protagonist of the film, though his status as the 'main character' is much more up for debate. A 26 year old coder working for Nathan's company, his status as an 'everyman' makes him surprised when he wins the 'contest' to enter Nathan's compound for an unknown prize. Though certainly skilled at coding (as seen when he hacks Nathan's security system towards the end of the film), his past as an orphan and his emotionally open personality are the true reason he was chosen, and this comes through in his interactions with the other main characters, Nathan and Ava. He initially meets Ava with a mixture of muted fear and intrigue, likely due to the uncanny effect that she produces (Spiegel, 2016, 369), which likely reflects the thoughts of the viewer, making him an 'audience surrogate' of sorts, owing to his outwardly generic personality. Of course, this soon turns to what appears to be a sexual and/or romantic attraction with Ava, evoking various images of 'gynoids' or 'sex-bots' that often codify an imagined posthuman future (Ornella, 2010, 312). This of course leads Caleb to formulate 'their' escape plan, in doing so falling for Ava's manipulations due to his growing empathy for the robot, which is another key feature of the classic 'Turing Test' as well as one of the ideas behind 'dangerous AI' and why they would be potentially harmful to humans – because of our emotions.



Fig. 70, Drinking with Nathan

(Drinking.jpg)

However, it is through his interactions with Nathan that Caleb's character can be seen in a different light, particularly his personal opinions on the 'posthuman', as well as his social awkwardness interacting with 'real' humans. Initially, Caleb sees Nathan as the 'eccentric genius', sharing philosophical discussions with him alongside drinking sessions and recreational walks. However, despite Nathan's dismissal of Caleb as nothing special, he begins to question Nathan's ethics due to Ava's secret messages – and upon seeing Nathan's collection of recordings, he begins to change his views on this posthuman utopia to a *Frankenstein*-esque nightmare, losing sanity to the point where he even doubts his own 'humanity', cutting himself to ensure he bleeds real blood, and peeling at his skin. Though he succeeds in tricking Nathan and releasing Ava, he himself represents the 'emotion' and 'fallibility' of humanity against the posthuman AI (Hyeck, 2011, 231)— having been tricked by both Nathan and Ava in their 'tests', likely resulting in his death as the 'superior' being leaves the compound free.

"She may or may not see herself in that way. What we know is that the young man sees her in that way. And one of the things that Nathan does in his setup here is he presents himself to this young guy as a kind of Bluebeard type figure, from whom this young woman needs to be rescued. That then allows [Caleb] to cast himself in the role of the rescuer, the proper hero of this little narrative. Now, whether Nathan is that Bluebeard figure or just presents himself as that is one of the questions that then is posed, but also is Caleb reasonable as casting himself as the savior / knight figure? In doing that, does he make himself the "hero" of the story, without stopping to think what's actually going on inside this machine's head?"

(Garland, 2015)



Fig. 71, Nathan Bateman
(Nathan.jpg)

Nathan Bateman, CEO of the fictional Google stand-in 'Bluebook', also serves as a central character in the story, primarily filling the role of the 'mad scientist' (Sirabian, 2001: 383) though his initial demeanour would suggest otherwise, appearing friendly and even somewhat 'stupid' in some of his interactions with Caleb – this is likely intentional, to help further his own agenda of testing both him and Ava. His dialogue analysing Caleb's emotions to his face, as well as his ultimate manipulation of both Caleb and Ava suggest a common fear attributed to the 'mad scientist' character and of trans/posthuman science in general – a lack of empathy, further evidenced by his cruel treatment of the past AIs and Kyoko, his servant. Therefore, though gifted, his character flaws create a sense of unease in the way he creates his constructs. In essence, he represents Pinto (2019)'s fear of the powerful and amoral 'neoliberal', who believes that AI of his creation will succeed humanity entirely.

'The basic idea of that character is that we would automatically distrust him, because we do distrust the CEOs of large companies. On top of that, he gives us quite a lot of reasons to distrust him. The question is if [that distrust] interferes with our ability to hear what it is he's actually saying, and whether what he's saying is right or wrong.'



Fig. 72, the unknown location
(Location.jpg)

This personality and identity is also reflected in his given home - An 'isolated' narrative with the exception of the intro and ending to the story, *EX_MACHINA* mostly takes place in and around Nathan's home and research facility, given the context of the narrative. Appearing to be in an area with a cold climate, Nathan owns swathes of land around his home, and is host to flowing rivers, lush forests and icy mountains, which serves as the host of most of Caleb and Nathan's philosophical discussions, separate from the technical aspects and test atmosphere that can be found in the complex itself. Furthermore, the isolated location, difficult to reach and seemingly far removed from any traces of society, are perfect for the ethically shaky experiments of a 'mad scientist', where the prying eyes of ordinary people cannot reach. It also serves as the location featured in many of Ava's 'dreams', where she imagines having escaped the facility and is able to roam free, unrestricted by Nathan's tests and her own artificial existence. Indeed, the outside serves as a perfect contrast to the artificial confines below, an unnatural entity based within an abundance of nature.

4.5: Interviews/Discussions: Mechanical Identities

During the interviews I conducted, there were discussions on series like *Deus Ex* and *Ghost in the Shell*, amongst other media examples – and sure enough, as much as there was discussion on radical bodies and changing forms, there was also a discussion on what it meant to 'be' one of these transhuman entities, to be something 'other' than human;

'I always think of – when I'm thinking of cybernetic enhancements, I always think of – I always go straight to *Deus Ex*, and just how that plays out, because I love the *Deus Ex* games, and they really intrigue me when I play them. Just the society they have built and just the attitude towards cybernetic people and – because that would be exactly what would happen, I think they've got a very realistic view [...] I like the way it approaches it and *Deus Ex* approaches it in a very intelligent manner, I find.'

(Respondent 10)

Here, we see that the above respondent, being very passionate about the *Deus Ex* series, has an intricate knowledge of how identity is constructed, both through the gameplay and story – the cybernetic enhancements show themselves through a branched level-up system not dissimilar to that seen in *Xenoblade Chronicles* or *Xenoblade Chronicles X*, which ties it in with the enhancement of status and power, which the lead writer of the *Deus Ex* series (Sheldon Pacotti) also expresses (Geraci, 2012, 741), seeing transhumanism as an 'expression of power' – most notably, Geraci's noting that *Deus Ex* does not 'force transhuman sympathy' is an interesting take on this kind of fiction, which the respondents both above and below discuss;

'I've not gotten very far in the story yet, but it's very interesting seeing this possibility of a resistance movement to the idea of trans- of modifications to the human body. Possibly religion-based, possibly otherwise, it just – seeing the social ramifications...'

(Respondent 30)

Discussions varied on the exact nature of the subjects, but they varied from the narrative of the game and how it portrayed the transhuman, to the various gameplay elements and how *Deus Ex* offered a feeling of 'control' over the character – but most discussed the cyborg aesthetic the game offers, and the themes specific to that context, such as identity – something with also appeared in discussions surrounding *Ghost in the Shell*;

"...there's always the classic *Ghost in the Shell*, which is the anime/manga/film show, which is very interesting – it's focused, this central philosophical focus on it is 'what defines a human being' – because the *Ghost in the Shell* thing is they replace every part of the human, and they're still a human being – but if you put together all the components to build a human, you don't get a human. So the question is the 'ghost' is the part of humanity that they can't figure out exactly where it comes from?"

(Respondent 33)

As seen above and in the previous chapter, it's a franchise that rings familiar with many people, and its saturation was only heightened by the recent (2017) film featuring Scarlett Johannsson as protagonist Makoto Kusanagi. In any case, ideas of mechanisation, brain uploading, and cyborgs/androids all come to mind when the film is discussed, and the radical transformations of both body and identity that come with it. Similarly, as a tertiary example, the popular sci-fi classic *Blade Runner* (1982), which follows the lives of various 'replicants' (artificial humans) and those who hunt them – it too has recently been followed up by a sequel, *Blade Runner*: 2049 (2017), yet another

example of this genre of film, and the ideas following them, seeing a 'revival'. A number of respondents mentioned the film by name (n=4) without my mentioning it, but more recognised the name upon me doing so as an example of trans/posthuman film. Regardless, the classic Ridley Scott film was also a go-to answer for my respondents as well;

"my brain immediately leaps to things like AI and Blade Runner, and obviously then, you have 'Do Androids Dream of Electric Sheep' and an awful lot of Philip K. Dick actually, with the same 'variety and impostor' and things like this."

(Respondent 2)

As seen above and below, the fictional media many of my respondents tended to associate transhuman theory with were ones with a heavy focus on identity and its construction – AI deals largely with the identity of a robotic child that plays at being human, while Do Androids Dream/Blade Runner deal with androids/artificial humans coming to terms with their own mortality despite their enhanced abilities, and their ability to 'dream' – notably, the idea of the 'impostor' is toyed with in Blade Runner, in which it's hinted that the protagonist, Deckard, may himself be a replicant hunting his own kind.

"I suppose like a cyberpunk thing, would be more – robotic limbs and that sort of thing [...] And *Netrunner*, that sort of idea. More *Blade Runner* than *Netrunner* [...] I find it's a very 80's thing, since – it's quite futuristic but also at the same time, set in the past – a lot of those like – those explosive – like steampunk, dieselpunk, where it's futuristic technology, but with a past aesthetic."

(Respondent 26)

As seen with interview 26, there is a striking visual element, of sub-genres of 'cyberpunk' or 'steampunk' that emerge and can be associated with these transhuman ideas, the merge of the personal and technology – and *Blade Runner*, alongside many other films and media, showcase these ideas, *Blade Runner* having popularised this kind of aesthetic, bonding it to science-fiction forever.

4.6: Conclusion

In conclusion, as an evolution and continuation on the previous topic, we see here what happens naturally when even slight changes occur to the body, much less more extreme ones, or being born as a non-human entity in a human shape, as seen in examples such as *Ghost in the Shell* or *EX_MACHINA*. We see how characters change and shift in relation to gaining new bodies and identities, and how they relate to 'normal', 'human' characters, such as the example of Caleb in relation to the creator, Nathan, and the AI, Ava. In the case of *EX_MACHINA*, the next chapter will discuss the grim finality of the power relations which are created with these AI constructs, particularly in how these AI are embodied and gendered.

With *Xenoblade Chronicles*, we see a more fantastical transformation, and thus with it, a greater sense of changed identities, such as the dilemma two characters, Zanza and Meyneth, have when faced with becoming very literal gods, though mortal in origin and nature — a grand idea, when contrasted with the more 'grounded' cyborg transformations of the other characters, and the other SF elements seen in the futuristic 'High Entia' race, which will be central to discussing the ideas of 'power' in both the story of *Xenoblade Chronicles*, as well as its gameplay, discussing combat and the idea of 'control' and 'strength' a player has when empowering characters in the setting of a role-playing game. The same applies for *Xenoblade Chronicles X*, though in the narrative, 'power' will take more of a socio-political role, alongside the transhuman abilities the characters gain, both in conventional and unconventional means.

In the case of the interviews, I found that though there was less discussion on existentialism and identity than perhaps I'd hoped for, there were still brief mentions

that made their opinions known, at least that identities do, in fact, change alongside bodies and these fantastic technologies - as for the next chapter, then, there'll be discussions on where this chain of theories ends - once bodies are changed, and identities reformed, what does that mean for the 'little people', for the unchanged, and the disadvantaged? And how could current power dynamics such as those surrounding gender and racial tensions continue or change?

Chapter 5: Power

5.1: Introduction

In this chapter, I will be discussing the last of the three major themes, that of 'power' – we've seen the various ways in which bodies can change, via cyborg transformation or even something more extreme and transcendental; as a result, identities change and reform, and then distinct, new ones form – as a result, shifts in 'power' due to these new abilities and these new 'standards of living' can create entirely new imbalances, or even make existing ones even more chaotic. Returning once more to my media case studies to showcase these fantastic 'power shifts, followed by a truly intriguing discussion from the interviewees, the below should grant an insight into how useful – or dangerous – these changes can be.

5.2: Xenoblade Chronicles: The Power of the Monado

The previous chapter's section on *Xenoblade Chronicles* detailed how the characters in the game responded and explored themes of change and differing identities, to the point where mortals become 'gods', or at the very least, cyborgs. That said, these are beings capable of shaping the landscape as they go, the former being the literal landmasses themselves, and the latter, masters of industry – and as discussed, even the main character is given a choice, having found himself in a position of great power.

This power is first seen in the abilities these god-like beings have – it exemplifies how these titans exist as extreme, posthuman entities through their ability to then create life – in Zanza's case, the Homs mentioned earlier are implied to be based on Zanza's memory of the now extinct human race, along with various other creatures that either closely resemble former Earth species, or are grotesque parodies of them – Another

race, the High Entia, also resemble humans, but with wings and elongated ears that give the impression of the classical 'elf'. That said, their creation separates them from the Homs in their 'purpose' – namely, a quirk in their genetics, when activated by Zanza, will transform them into inhuman beasts named 'Telethia', which then proceed to wipe the Bionis clean of life, and the 'ether' that inhabits them, to reabsorb them into himself, thus sustaining his (conditionally) immortal existence. This directly leads to yet another related plot point, rife with transhuman ideas – The High Entia that exist during the timeframe of the game's narrative realise Zanza's plot, and begin actively encouraging breeding with Homs, learning that the resultant High Entia/Homs children are not affected by Zanza's 'curse', and also have other characteristics like the inability to fly, and shorter life spans (pure High Entia can live for centuries), mirroring a eugenics project (Foster, 2019, et al), albeit with a beneficial end goal – as these ideas are, in real communities, very much frowned upon due to their past (Bostrom, 2005a, 4); though this practice was once associated with 'transcendence' (Harrison and Wolyniak, 2015).



Fig. 73 – Several Homs

(xenoblade-novelisation-006-intercom.png)



Fig. 74 – The High Entia

(High_entia_concepts.jpg)



Fig. 75 – Melia, a hybrid High Entia
(Melia2.png)

Another central idea of power exists in the 'Monado' – seemingly named for the primal aspect of God in Gnosticism, it serves as the primary weapon of the main character Shulk, a red sword that exists as the initial vessel of the god Zanza, and holds the power to damage the otherwise invincible Mechon armour. Aside from being a sort of biomechanical machine that Zanza can upload his consciousness to at will, the Monado also acts in tandem with Shulk's development, reacting to his thoughts and emotions, releasing higher levels of power – forming a symbiotic bond between the human and technology. This eventually comes to a head when it is revealed that Alvis, the AI that survived the destruction of the 'real' universe, is the Monado itself, and guided Shulk on his path to defeat Zanza. Therefore, the Monado can be interpreted as a true 'transhuman construct', merging the concepts of advanced AI (Bostrom, 2014), human transcendence (Graham, 2002), and mind uploading (Geraci, 2010). Meyneth also possessed her own Monado, but it was taken by Zanza to increase his own strength, so

its abilities largely remain unknown, aside from it also serving as a vessel of Meyneth's consciousness.



Fig. 76 – The Monado
(Monado.png)

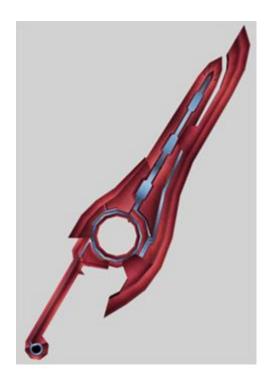


Fig. 77 – The Monado II

(image.png)



Fig. 78 – Meyneth's Monado
(Meyneth_Monado.jpg)

Another central conflict exists as the result of Egil, the 'leader' of the Machina, though in name only – his kin prefer to stay out of his conflict. His history with his friend Arglas and Zanza places him as the primary antagonist until Zanza reveals his true nature, at which point he serves as an 'anti-hero', though his actions are not fully

forgiven. As the sole ruling power on Mechonis after Meyneth's disappearance, he has complete control over the AI drones known as the Mechon, and together with his sister, Vanea, oversee the project of the Face Mechon, much to Vanea's disapproval. The Mechon, then, serve as an extension of his body, allowing his arm to reach across the Bionis to further his agenda — and the Face Mechon represent his ethically unsound experiment on the transhuman in order to resist the Monado, which disrupts his plans. Using the semi-biological nature in order to render the Monado useless until its upgrade, due to its initial inability to damage creatures from Bionis. As such, he takes a very inactive role until his confrontation, but despite being a Machina, he himself undergoes drastic bodily changes, gaining strength as the game progresses.



 $Fig.\ 79-Egil$

(Egil.png)



Fig. 80 – Yaldabaoth, his Face Mechon

(593px-Mech_Jaldabaoth_-_Xenoblade_Chronicles.png)

As seen above, Egil is himself in possession of a Face Mechon, known as Yaldabaoth – also known as 'Gold Face' – it, combined with a special ether suppression device (Apocrypha), allows it to resist the Monado even without a Homs host up until the device's destruction, and besides is described as the 'strongest Mechon ever built', and allows Egil to interface directly with the armour, as well as every other Mechon at will, allowing for complete control – he embodies himself within his numerous 'objects', themselves becoming agents in his plan, sharing mechanical origins, which could be seen as a reflection of new materialist theory (Bryant, 2011). Eventually, as he grows more desperate with the party's advance on the Mechonis, Egil uses his Mechon to interface directly with the Mechonis itself, replacing Meyneth as its 'consciousness' – at this point, Egil is essentially the Mechonis itself, and is barely stopped by the party

from using it to wipe out life on Bionis in mere moments. It should be noted that he does not transcend to become a 'god' like Zanza or Meyneth, and like Shulk is given the option to, but rather achieves massive amounts of power through his own technical expertise, up to the point where even controlling the continent-sized titan becomes natural to him, perhaps due to his existence as a mechanical life form. After his defeat, the difference between him and Zanza is made clear, however, and Zanza, upon returning to the Bionis, wastes no time in destroying the entire Mechonis with Egil still within, the latter using the last of his energy to help the party escape, upon realising his mistakes and the threat that Zanza poses – he desired transcendence, but was unable to achieve it on a spiritual level, merely the physical (Bishop, 2010, 702).



Fig. 81, the Mechonis Core

(Dolphin.exe_DX9_20131016_180830.png)

Xenoblade is, by most people, considered a role-playing game, or RPG for short – one which usually has a certain party of people, with the player usually controlling the protagonist, who travels a non-linear world in order to reach the ending, usually being given hints and clues along the way (Jenkins, 2004). Indeed, *Xenoblade* does follow this formula, with multiple party members, with the emphasis being on controlling Shulk (though you can change this). First, then, there is the matter of the virtual world that makes up Xenoblade, though it was described above, the way in which it interacts with the player was, to the point of its release, unprecedented.

Indeed, this massive 'virtual world' is one major transhuman factor towards the actual act of playing the game (Geraci, 2012, 735), and its large size only helps matters, being populated by countless enemies, NPCs (Non-Player Characters), and other entities. Incidentally, the player is encouraged greatly to focus on this aspect, with the existence of 'landmarks' and 'locations'. These exist as not only 'warp points' that can save the player the trouble of having to walk manually to these locations again, a notably lengthy feat, but also grant the player 'experience' upon reaching them, which as per RPG tradition allows the player's characters to grow stronger and 'level up', gaining a sense of strength as they grow (ibid, 738). This relates back to Foucault's concept of 'biopower' (Foucault, 1991) as even in the sense of the virtual, a 'more powerful' character is ideal. Furthermore, the existence of 'secret areas' that give even more experience, as well as their beautiful appearances, give a deeper sense of immersion to this virtual world, making it seem more 'organic' and 'real', and encourages the player to explore every corner to the massive world that Monolith Soft created.



Fig. 82 - Finding a Landmark
(GemMan.jpg)

Iwata: "So even the scenario writer was overwhelmed! (laughs)"

Takeda: "Yes, I was. For instance, there's an area called Colony 9. The sheer scale of it is incredible. When I was working on the scenario, I had in mind the type of village that appears in regular RPGs. But then when I actually came to play the game, I found that this single village had so many ideas put into it that it could have made an entire game in itself. That's why, as we neared the end of the development process, it was really brought home to me just what a monumental project I had been involved in."

Iwata: "I see. Now, generally speaking, one finds that the bigger the game world gets, the less detailed it becomes. But with this title, you were looking for a world that was 'both vast and intricately detailed', weren't you, Takahashi-san?"

Takahashi: "That's right. I wanted to make it so that even if you went to the far edge of the map, you wouldn't find it empty. I wanted to ensure that wherever you went, there would be something there waiting for you, be it something you'd been seeking, a quest, or a fearsome monster. In certain places, I also wanted to have secluded spots where players would think: 'Wow, there are beautiful areas like this here in this world!'"

(Iwata, n.d.)



Fig. 83 - Finding a Secret Area

(Glowmoss_Lake.png)

In this game, however, levelling up doesn't merely function in the traditional way here – amongst other points gained from visiting locations and defeating enemies are SP, or skill points, which allow the player to choose from various skill 'trees', which increasingly become more difficult to fill, yet impart greater abilities upon reaching the end, either towards that character alone or towards the entire active party. These skills greatly reflect on what the character's role in the story or as a unit is – for instance, the character Melia focuses largely on ether, or magical, based attacks – therefore, many of

her abilities increase her capacity for ether attacks, and the damage she is able to deal with said attacks. And in Fiora's case, her skills have very mechanical names to reflect her status, and focus very much on offensive and defensive increases, improving her mechanical body. Furthermore, the player can use 'skill links' in order to share abilities between party members, such as allowing certain characters to use equipment or abilities that they would otherwise be unable to use, resulting in a large amount of customisability with the player's characters, changing and improving them to their liking – this feeling of 'control' and 'mastery' is central to how people absorb this media (Kinder, 1993; Baranowski and Buday, 2008).



Fig. 84 - Skill Trees

(links.jpg)

As far as combat goes in *Xenoblade*, it at first seems to follow the standard action-RPG fare, with battles taking place without a transition to another screen, and the battle taking place in real time, with the in-game clock still moving throughout, allowing for the immersion of the game world to be unbroken. In the battles, the players can select from various 'Arts' that improve stats, or simply damage the enemy, some causing 'status effects' that weaken the enemy in one capacity or another. Therefore, the player has a great amount of control on how the flow of battle goes, especially with the 'Chain

Attack' feature that allows for time to be briefly stopped, to allow for the three active characters to attack in sequence, setting up combos that, once again, are heavily customisable by the player, often leading to massive amounts of damage – though these Chain Attacks can only be used after a certain period of 'charging', meaning there are limitations to this power. The player has the option to leave battle at any time, though enemies will often give chase if able, and since the battles do not remove you from the game world, other enemies can often join in at a moment's notice, including powerful 'boss' enemies that would otherwise require a lot of preparation to fight, resulting often in a loss for the unready. Therefore, the player has a degree of control and planning when it comes to combat, which deviates from the formulaic battle systems of many other games of this genre.



Fig. 85 – a Common Battle

(xenoblade-chronicles-battle.jpg)

Furthermore, the player also has a great amount of control on how the story itself progresses, and how quickly. The direction of the main plot, namely the fight to defeat

the Mechon threat and later Zanza, is fixed and cannot be altered under any circumstance. However, the game's massive open world has NPCs scattered across it that give out 'side-quests', which are common to RPGs. These involve completing objectives that have varying levels of relevance to the main plot, often involving matters specific to the people that have given them out, in the process expanding the 'Affinity Chart', which maps the relationships you and the party have with each other, and the NPCs, creating a complex web. However, along with changing the pace at which the player progresses through the game, these also have incentives to complete them. Therefore, by furthering the lore of the game world, the player also receives EXP, SP, as well as useful items or equipment that would help you towards the rest of the game. This largely customisable gameplay, I argue, is greatly enhanced in a game with as large a scope as *Xenoblade* – it mixes the theories of 'ludus' (where winning and losing is clear and defined) and 'paidea' (where the game is nonlinear), as both are present in *Xenoblade*, to great effect (Ang, 2006, 310). – it creates a fully interactive experience.

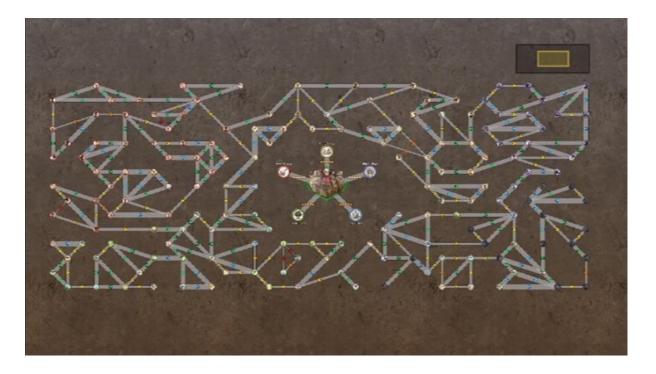


Fig. 86 -The Affinity Chart

(Xenoblade_Affinity_Chart.jpg)

5.3: Xenoblade Chronicles X: Mechanised Strength

In the previous chapters, discussion points have again been around the changing of the body into mechanical constructs, as well as the idea of forming new identities based around that – but what of the power struggles that it creates? And similarly, what of the struggle to survive that humanity endured when escaping its destruction by an overwhelming alien force?

Indeed, when discussing Lao's betrayal of the party, after falling in with the Ganglion forces who wished to stamp out what remained of humanity, we not only learn what he learns about the Lifehold and the lack of 'real bodies' contained within, but also about the true nature of humanity's difficult, and predictable, choices when faced with oblivion. The truth of the matter is, that not everyone could escape earth. Out of billions, only a fraction could leave in the interstellar 'arks' – not only as crew, but also in the limited databanks that would make up the 'mainframe' that contained the consciousnesses of the 'survivors'. The truth Lao discovered is the fact that the 'chosen' were not truly equal; the rich and powerful, and 'useful', were given priority to be uploaded into the mainframe and into the first mimeosomes, and those who were deemed undesirable were simply left behind. Lao eventually escapes due to the compassion of one of the player's allies, Lin, and the party resolves not to spread the truth about the Lifehold to the general public yet, to avoid mass hysteria and panic. Indeed, here we see that this posthuman future comes at a price of very real class struggle and an overly meritocratic society that has, in this instance, decided the fate of the human race – reflecting fears of various trans/posthuman thinkers on exactly 'who' could control how this technology develops (Bostrom, 2005a; Harrison and Wolyniak, 2015, et al)

Lao's character is a complex one, serving as both a hero and villain in the piece – at first, he serves as an optional party member and can be raised as normal, occasionally commenting on the various quests he is taken on; however, after his betrayal, this is no longer an option, and we get a deeper insight into his character, and his true views on humanity. Having learnt the truth of the destruction of humanity's original bodies alongside the selection process of the rich, famous, and 'useful' to digitally board the

White Whale, Lao becomes bitter and jaded towards the nature of humanity, and their desperate need for survival despite casting aside most of it, including his own wife and child, echoing the views of various theorists who fear this imbalance in rights (Bould, 2007, et al). Therefore, it is implied his views on the transhuman are likely as bleak as his views on humanity as a whole – he fights the party with disregard for his own life, and seeks death openly on multiple occasions when he is confronted, wishing to join his family.

After the defeat of the Ganglion, however, Lao redeems himself by attacking the vulnerable Ganglion leader from behind, causing them to fall into the protoplasm and transforming Lao into a monstrous chimera using the DNA from all life forms on Earth, as well as Luxaar. As stated before, this is very much a primal, monstrous transformation (Campbell and Saren, 2010, 167), and the abilities it grants are many, including immense strength, size, and the ability to read Luxaar's memories. Once again, Lao rejects this change, asking the party to kill him as he loses control. Interestingly, however, his mechanical body is still capable of fusing with the living organisms from the Lifehold; furthermore, this makes his revival after the game's ending even more bizarre, as his body seems to have been perfectly restored, somewhere far away from the Lifehold, assumedly due to the hooded figure that awakens him – whether this implies some sort of transcendence has taken place or not is unknown, but his desire to die is apparently left unfulfilled. In the end, Lao represents nihilism towards humanity as a whole, and thus rejects transhumanism on this basis, being one of the only human characters in this series to do so, showing a variance in ideas between the characters, though not in the classic sense of the 'techno-sceptic' (Hartouni, 2008)



Fig. 87, Grandmaster Luxaar

(Luxaar_scan_1.png)

While most of the villains play a minor role in the narrative, Grandmaster Luxaar serves as the primary antagonist of the game, leading the Ganglion forces that were partially responsible for the destruction of Earth, and seeks humanity's destruction on Mira. Though he is an alien, he has a close relationship with humanity, and the reason for their creation. As established, he learns that humanity hold the 'key' to destroying the Ganglion on the genetic level, and that both races were created by the 'Samaarians', a precursor race. Here, we see that he fears humanity inherently as a 'living weapon', one that can bring down him and his entire race, but also curses the Samaarians and their hold over his race, and their existence as a 'manufactured' one as well. Despite this, he openly uses enhancement technology such as the Skells to further his goals, so his stance on 'transhuman' technology seems to be positive, even if the actual 'posthuman' subjects in the narrative are his sworn enemy, fearing and loathing them for a perceived

'superiority' – perhaps unaware entirely that they are no longer possess the human DNA he fears within their bodies.



Fig. 88, the Battle Screen in Xenoblade X

(Xenoblade-chronicles-x-screenshot-01.jpg)

Kojima: "These robots are called Skells. Once you obtain one, you can freely go

to any location in this world, and it feels great."

Yokota: "The extremely large field really contributed to the great feeling you

get when you ride one."

Iwata: "Ah, I see. So in this way, the open-world concept and Skells go hand-in-

hand."

Kojima: "That's right."

(Iwata, n.d.)

The combat system in *Xenoblade X* is, at first glance, very similar to the previous game

- as before, you attack automatically, and select various battle arts in order to deal

damage, heal party members, and so on; and this is all done in real time again, with the

danger of dangerous enemies, including the dangerous 'Tyrants' (boss monsters)

joining in. However, the real change to the gameplay comes in the form of 'Overdrive',

which replaces the Chain Attack feature from the previous game. Once a certain amount

of TP (Tension Points) have been gained in battle, the player can activate Overdrive,

which enhances their fighting ability greatly, reducing the cool-down period on arts and

increasing attack power. This ties greatly into the story, and is only available after

Chapter 5, when their existence as mimeosomes is revealed; Overdrive is achieved by

removing the limiters on their mechanical bodies, giving them greater strength at a high

energy cost. In addition, this feature can also be used with the Skells, reaching even

greater levels of power – thus tying the posthuman themes into the game proper.

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5.4: EX MACHINA: 'Strong' AI

In *EX_MACHINA*, as seen in the previous chapters, a clear struggle begins to emerge when the AI, Ava, seeks to assert her own identity and become 'human – this puts her at odds with her sociopathic creator, Nathan, and so this forces her to consider her own power dynamics, and what she can use to escape this seemingly hopeless situation.

For instance, in their fifth session, Ava declares that she is 'going to test' Caleb, and asks him questions such as his favourite colour and earliest memories, revealing his first answers as lies and causing him to open up more – Caleb snaps back that she's like a lie detector, but then Ava begins asking more serious questions;

"What will happen to me if I fail your test? Will I be switched off?"

At this point, the power cuts again as Caleb fumbles to give a response, and Ava suddenly asks a fifth question – if Caleb wants to 'be with her'. The scene then cuts to Nathan and Caleb outside the complex, musing on philosophy – specifically, Caleb asks Nathan why he made these AIs, and Nathan retorts that it was 'inevitable', that this was bound to happen sooner or later, thinking that the singularity is close. He then asks Caleb if he 'feels sorry' for Ava, since a software update after the test will erase her personality just like the older models, effectively killing her – however, Nathan says to feel sorry for himself, as this development will see AIs looking down on humans the same way as we did upon ape fossils – dead and primitive, echoing some theorists' most extreme 'end' for humanity (Bostrom, 2003, 31; Ferrando, 2013, 26).

Following these events, Caleb spends the beginning of the sixth session awaiting the power outage, which Ava promptly begins, and learns of Nathan's intention to 'kill' her soon after the test is done, removing all agency (Garoian and Gaudelius, 2001, 346), and formulates a plan to get Nathan drunk and reprogram the security functions so that power outages open all locks instead of sealing them, allowing her to escape with him. However, upon talking to Nathan upstairs and beginning to try and get him drunk,

Nathan comes clean and admits that he *has* been watching them all the time, through the power outages via battery-powered camera, and even witnessed Caleb's breakdown in his room via hidden camera. Caleb is disturbed by Nathan's wildly unethical practices, but Nathan states that this was necessary to make Caleb distrust him, as even tearing up the painting was staged, and wonders if Ava is even capable of manipulating Caleb to help her escape, as the real test is not the Turing test; but rather testing Ava to see if she can indeed plan her own escape, but Nathan was thankful he was able to stop it. However, Caleb reveals in turn that the plan was itself misdirection – he had already changed the locks when he was drunk last.



Fig. 89, Nathan lies dying, killed by his creations

(Nathan's End.jpg)

Indeed, Nathan's moral ambiguity is central to his status as a foil to Caleb and evokes common ideas about ethics and AI. In addition to his heavy dependence on alcohol, Nathan's boxing of his robot constructs and the cruel tests he performed on them, both dead and alive, showcase his cruelty, and despite their advanced AI, he doesn't seem to think of them as the 'posthuman' creatures he philosophises with Caleb; despite claiming them to be like his 'children', he designs them with the ability to have sex with humans, even doing so himself at one point in the story, and encourages Caleb to want to do the same, despite the latter being clearly uncomfortable with the idea

initially. In addition, his intentional east-Asian design of Kyoko and the way he treats her invokes clear imageries of racism (Bould, 2007, 180) and sexism projected onto his creations (Cerulo, 2009, 536) to add to his crueller nature. Naturally, all of this leads to the AI rebellion that ultimately kills him, having underestimated Ava's manipulative abilities as well as Caleb's intelligence; showcasing that despite his genius, he failed to fully understand the human *or* the 'posthuman'.

"I would say there is a gender narrative there. Specifically, the thing that I was interested in was just raising questions. In a way, they're more fundamental than the way men represent or objectify women, because I think there are elements of that in there that are probably quite obvious. But part of it is, does she have a gender? Is she a woman? Is it or is it not reasonable to say 'She'? You could, for example, take Ava's mind and move it to another body that Nathan had created that had the outward appearance of being masculine [...] In other words, if the body is interchangeable, then what is it that denotes gender?"

(Garland, 2015)



Fig. 90, the 'living area'

(Living Area.jpg)

"I suspect, even though I've been working on a movie which is ostensibly concerned with stuff like strong artificial intelligence and things like that, in a way it's got more to do with big tech companies than any sense that computers are gonna start thinking. It has to do with Edward Snowden, [questioning] exactly what information tech companies have about us, and what we've given up of ourselves without realizing."

(Garland, 2015)

Nathan's status and power are reflected in his home - the levels of Nathan's complex are filled with furniture and goods implying a great amount of wealth, having a 'smooth white' aesthetic that evokes images of Apple technology, which would reflect Nathan's status and outward appearance as a rich CEO behind a technological company. A dissonantly peaceful location, the living area is where much of the manipulation between Caleb and Nathan takes place, under the guise of civility. Down below, however, the smooth, white panelled walls without any trace of buttons gives off an incredibly futuristic variation on this 'Apple-esque' look. Indeed, this extends to Caleb's room while staying, which is furnished well on the inside, but lacks windows, or any connection with the outside world, something which Caleb himself comments on - making clear the area is meant to be a cold research station, as opposed to a comfortable home. To add to this, the entire complex undergoes a 'lockdown' when the power is cut, locking every door with no release; while the entire area turns deep red, giving off an oppressive feeling that panics Caleb the first time he's exposed to it – the area becomes something reminiscent of darker sci-fi films (Campbell and Saren, 2010, 167), of the 'evil' laboratory, hinting perhaps at both the facility and Nathan's true nature.



Fig. 91, The 'test room'

(Test Room.jpg)

One particular room, however, is perhaps the one most central to the plot and themes of *EX_MACHINA*: the 'test room' — within it is a panelled glass wall between the test subject and the human tester (although it would be revealed that both are being tested), reminiscent almost of a prison, a sentiment that Ava certainly seems to share, wishing to escape. Initially, it seems harmless, with Caleb and Ava having friendly conversations, though there is focus on a single cracked segment of the panelled glass, as if something has struck it. This later turns out to indeed be the case, with one of the older models having become desperate and violent in her attempts to escape Nathan's laboratory, and ended up damaging the panel. Otherwise, this serves as a source of wonder for Caleb initially, as he watches Ava through the CCTV cameras, while Ava comparatively has no privacy in what is effectively her 'room' — altogether, it is an interesting grey area that shows off the moral implications of what Nathan is doing and his power over his creations, and is the home of most of the key decisions in the story, ultimately being abandoned when Ava escapes.

However, it is through Nathan's use of technology that he too is capable of manipulating both the human and posthuman – at several points we see footage from Caleb's perspective, usually showing Ava in the midst of various activities; at one

instance, Nathan verbally abuses and tears up Ava's drawing, or so it appears to Caleb. In truth, his footage is deceptive, and Ava is in on the act, which disturbs Caleb heavily, showcasing Nathan's lack of ethics that is often seen in his type of character. It extends to the point where shots seen from behind Caleb's mirror, and other places, were in truth from the perspective of Nathan's hidden cameras, even if this fact is not made public until the end stages of the film. Ultimately, it is the use of this 'networked' technology (Hayles, 2001, 146; et al) in his experiment that makes Nathan a transhuman player in his own creation, combined with his stated genius-level intelligence and ownership of a massively influential IT company – it can be argued, then, that the only truly 'human' or 'normal' player is the test subject himself, Caleb.

"Well, those companies are involved in trying to develop very complicated AI. And they definitely have an intention, which is to create machines that have similar qualities to us. So not just processing abilities, but feeling abilities. In terms of how close that is, it's really, really hard to judge [...] Whatever it is, it's not something that's just around the corner."

(Garland, 2015)



Fig. 92, Ava

(Ava.jpg)

"I don't necessarily share the anxieties about AI that I know exist. I can see AI as *potentially* dangerous. Nuclear power is *potentially* dangerous, as well. But that doesn't have to stop us from using nuclear power, and it wouldn't have to stop us from creating strong AI."

(Garland, 2015)



Fig. 93, AVA: SESSION 7

(Session 7.jpg)

Interesting also is the use of the 'SESSION' cards used to divide scenes between Caleb and Ava, under the nature of their 'test' relationship. Initially, it appears that these slides are used to show that Nathan is recording their actions, and that the entire narrative revolves around his machinations, where Ava would manipulate Caleb, therefore proving her adaptability and intelligence. However, the last of these, 'SESSION 7', is displayed directly after Nathan's death by Ava and Kyoko's hands,

and Caleb's imprisonment. This is likely meant to be interpreted as Ava having orchestrated these 'sessions' from the beginning, and that she has successfully played the other occupants of the complex for fools, fleeing into the outside world, having successfully 'risen above' humanity, metaphorically and literally (Pordzik, 2012, 143). Indeed, this scene plays on the fears of many AI theorists, that as we test AI, it too could test us, learn, and supersede us if left unchecked, leading to them becoming the 'posthuman' in a dangerous way that threatens the humanity that exists completely.

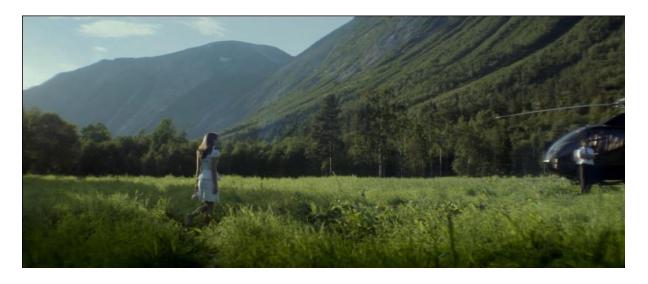


Fig. 94, Ava's escape
(Ava Escape.jpg)

In the case of Ava, however, her power is to go beyond the AI expectations of both Caleb and Nathan that codify her true character and status as a posthuman being – namely, her manipulative skills. Firstly, she also displays skills unique to her existence – causing a power outage using her own mechanical body, if she is to be believed; it is possible that Nathan was instead orchestrating those power outages. Still, her intelligence and cunning exceed even what Nathan had planned, as she manages to outplay him at his own game. However, like her creator, she notably lacks empathy and walks out into the world a potentially dangerous sociopath – while manipulating Caleb and killing Nathan, she even causes Kyoko to rebel, and feels nothing for the latter as

Nathan breaks and kills her in their struggle, implying that she was just another step on her plan to escape. Intelligent, but unfeeling, Ava can mimic human emotions, making her very much something to be feared, and embodies the 'dangerous AI' theorised by scholars (Zeng, 2015; et al).



Fig. 95, Kyoko

(Kyoko2.jpg)

Though a relatively minor character, Kyoko embodies certain other ideas about AI and machines – namely, their existences as tools of mankind. Existing as the meek slave of Nathan up until her eventual rebellion and death, Kyoko exists as a mute and submissive feminine figure throughout the film, with one exception – the moment where she removes her synthetic skin in front of Caleb, as if to help warn him about Nathan's true nature while Caleb explores the dark secrets hidden in Nathan's private room. Otherwise, she is used and abused by both Nathan and Ava, and while Caleb is notably disturbed by her status, he focuses more on rescuing Ava and outwitting Nathan. Ultimately then, Kyoko embodies the AI that could not become 'posthuman' or 'embodied' (Cerulo, 2008, 535), due to the constraints put on her by Nathan, who has better plans for his other creations.

5.5: Interviews/Discussion: Who Holds the Cards?

"I think that, if the singularity – if transhumanism takes the form of superior human intelligence, then we'd get a sort of singularity effect, it would be very drastic and all the power would end up in very few hands, and we'd better hope those hands are good."

(Respondent 7)

In the previous chapters, I discussed the ideas of 'transformation' and 'identity' with my respondents, who answered with various ideas, and what I ended up discovering was an incredibly interesting set of stratified answers, naturally sortable into two distinct categories – those who 'saw a positive future', and sub-sections within, and those who 'saw a negative future' – within these, specific patterns began to appear.

Firstly, out of the people I interviewed, a majority were positive and hopeful (n=14) about the potential applications of trans/posthuman technology, having favoured and perhaps been influenced by stories of a more utopian nature, where technology benefits mankind instead of explicitly causing its decline and destruction, leading to a more peaceful and advanced world;

"Exactly, like the way we're thinking about things and searching things is a lot different, back in the day we used to retain knowledge, but we don't really retain knowledge anymore, we research it. We're very good at finding knowledge now [...] and everything has to adapt around technology now, technology and just the internet is such a massive part of our lives [...] we're so interconnected now, and I mean we can just talk to someone in Australia at a whim, you know, it's crazy."

(Respondent 10)

With the above and below quotes, we see a line of reasoning not dissimilar to that discussed by Vicini and Brazal (2015) in their work, that transhumanism can encompass even wearable and non-grafted technology by default – the 'power' of human beings increased when basic tools, or even the internet was created (ibid, 149), the two talking about the endless good-natured application of said technology, but quoting Haraway (ibid, 152) when discussing the opposite, where 'new networks of domination' – the below quote particularly equating this kind of human progress with weapons;

"Well, to some extent it already has, which is that we have fire, phones, computers, tablets. Just sheer technology, we have always sort of advanced beyond the basic human form, because at base level, a spear makes a human more dangerous than it was beforehand, tall buildings effectively a form of posthumanism."

(Respondent 33)

On the other hand, a great deal of people (n=11) were far less hopeful about this prospective 'future', seeing a more negative, dystopian view, something more monotonous, dark and mechanical, where humanity is in a far worse state for having been 'developed' and 'unified', or that perhaps human nature would remain the same, despite the advanced in our minds and bodies;

"Yeah, isn't it kind of depressing? Like all of these dystopian films, it's just like we end up reverting to like supposedly hegemonic, natural ways of being, you know? Women in domestic duties, men hunting, and fighting. And in this case, I'm thinking of like zombie movies..."

(Respondent 3)

The above respondent's fears come about in more than one interview, where the respondents discuss the potential impact on gender roles, which was discussed by Haraway as being unfortunately very possible (ibid), those 'new networks of domination' reproducing toxicity in the form of 'sexism, racism and ethnocentrism' particularly, reinforced through Vicini and Brazal's own discussion that the stereotypes involving technology being a masculine interest (ibid, 153) could easily result in market dominance, with women and their bodies being relegated to being reproduced endlessly in virtual spaces, with pornography at the forefront.

"I think what people don't think about a lot is like, is there gonna be some kind of isolation coming between people who go with this posthumanism stuff? Like as it advances further and further, it's like – do you go for it, do you not?"

(Respondent 9)

Specifically, however, one thing that I found particularly interesting was one point about this 'dystopian' future that was a constant principle – with no discussion about their political leanings, many respondents (n=12, more than had an overall negative view on the idea of trans/posthumanism) discussed their fear of a rich, capitalist class being in possession of these technological and medical advances, and the future of humanity potentially being dictated by this ruling class;

"I mean in an ideal world, it becomes so common that everyone could benefit from it, even sort of those who are less well-off [...] But, I think that it's probably more likely that only those that are rich enough to afford such things would be able to benefit from it."

(Respondent 6)

"Oh, it's the same story – the rich and powerful would benefit from whatever it was, and everybody else would be cast by the wayside. I mean, we see it happen

all the time – it's happening now, you know, with the wealth discrepancy and stuff, so it's always the rich and powerful that get the benefit of this kind of thing."

(Respondent 16)

The first quotes here illustrate the major defining points of all the ones below – despite a desire for an egalitarian world, most respondents discussed the likelihood that the rich would be in charge, similar to many scholars' fears (Bould, 2007; Park, 2014; et al), creating a wealth disparity bigger than anyone had ever seen, and could even cause classes to become even more distinct, with Gottlieb even imagining an undying ruling class at the extreme (Gottlieb, 2018, 107).

"I feel like, as a sort of class issue, it's usually more of a class or wealth issue more than a racial parallel, because, if it is the case, these people, once they have cybernetic augmentations or whatever, then that secures your position, it would especially if it's a type that could improve your intelligence somehow, then you know, it would really perpetuate your position, lower social mobility quite a lot-"

(Respondent 13)

More specifically, however, the above respondent discusses the idea of the 'body' itself being relative to the 'power' one gains in society, which Park (2014) discusses when writing about medical implants and their untapped potential – a cyborg body is liable to be altered (Park, 2014, 305), which can, as the respondent implies, 'change one's intelligence' or even other abilities, being potentially crippled at the press of a button, or even rapidly improved, depending on one's actions.

"I can see this being a thing if transhumanism happened and things stayed the same – that it would be like 'oh well, the rich can have like' - you know, almost diverge as a species – well, the whole evolutionary thing, it could take a really sort of dystopian turn of like – they diverge as a superior species compared to the working class, but I doubt that will happen, because – I also don't think they would get to that stage without having an overhaul of the system."

(Respondent 19)

Most interestingly or all, perhaps, the above respondent discussed at length that the ideas of transhumanism would not at all be responsible for this dystopia, but rather the trappings and systems already put in place on the world by capitalism and its followers, a sentiment which Braidotti (2018) also shares, stating plainly that if said system is not overhauled, it will drive technology without a doubt, but social justice and the ethical consciousness of humanity will further dwindle, resulting in a world where the empathy for those weaker than the ruling class may completely cease to exist.

5.6: Conclusion

To conclude, here we see the natural continuation of what happens when abilities are enhanced, and personalities changed – a struggle for power. In *Xenoblade Chronicles*, this takes the shape of a conflict between humans and machines, and then both against purported 'gods' who possess strength that makes their own seem insignificant – before ending with a choice one man makes, rejecting power for the sake of humanity's betterment. Furthermore, we see the 'increase' in power the player finds when progressing and fighting through the game, 'levelling up' and strengthening the characters, and by extension, themselves. In *Xenoblade Chronicle X*, the same gameplay rules apply, only on a grander scale due to the larger game world, as well as the existence of the 'Skells', the robot exoskeletons that grant absolute freedom once they gain the ability to fly, and overwhelming strength.

In *EX_MACHINA*, we see instead the power struggles between the creator and the created AI, with the character of Caleb an unwitting pawn of both – with the AI gaining 'power' and escaping into the real world – to what end however, is unknown. Interesting to note are the inclusion of not only racial implications but especially gendered ones, with the female-presenting AI having been abused and coveted by men, eventually rebelling against this existence and escaping – although in Ava's case, she sacrifices even her cohort to escape.

Finally, in the case of the interviews and discussions, I decided to present a duality in what people expected when anticipating a 'transhuman' or 'posthuman' future – indeed, some were positive about the changes that had not only already occurred, such as the internet, but also ones that could occur in the future, bolstering the examples of body enhancement brought up in Chapter 3. That said, many people also saw a much more dire future where the inequalities of today's world are not only continued, but enhanced, with a raging capitalist class only becoming stronger in the face of new technologies and sciences, something mirroring Nathan from *EX_MACHINA*, the morally grey CEO.

Conclusion: A Future Transhumanism

Media Exposure and Potential for the Future

With the thematic chapters complete, there's just one section of my hypothesis left to

discuss – and that's the spread and use of media that enables these trans/posthuman

theories to continue - namely, screen and video games. Back in the literature review, I

discussed various uses for these technologies and how people interact with them, and

this served as a talking point for my interviews, wanting to see how people discussed

these technologies, and thought of them as part of their everyday lives.

"Well, if I just wanna have something, I usually - I like to interact, a lot with

things. So games are perfect for that, I like to create my own experiences, but

then sometimes I just, I do wanna just sit back and let the experience take me –

but, you know, shown visually [...] or if I just want to experience different

emotion, I'd watch a movie or something..."

(Respondent 10)

This section began much as the interview began – with the opening question of 'How

much science fiction film/TV/video games do you consume on average per week?', or

some derivative thereof. However, it mostly just serves as an indication of the interest

people have in these niche media, not necessarily a numerical value that would be

integral to my findings. That said, I would infer that anyone who described spending

more than 5 hours per week on these media combined could be described as 'invested'

to the point where it would be impossible to deny the thought they put into how they

entertain themselves;

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"Ah, per week, well, normally I would, if we count films and shows as sci-fi, I would say that I would invest myself in about maybe 8-10 hours a week? Through normal means, I'd like to invest myself in about 10-15 hours per week, but for video games it can be a lot more than that, because whereas said 8-10 hours a week very recently, because I could watch maybe 4 films a week, or maybe some episodes? For video games, let's see [...] it could be between 20-30 hours a week..."

(Respondent 4)

As such, the vast majority of people I interviewed noted times equal to or exceeding five hours per week (n=16), with others simply hinting at a time greater than it, while not giving a precise number due to uncertainty. Therefore, I stand by my sampling method, as it was able to provide people who were familiar with the media I study, and would be able to provide an interesting discussion on the matter.

That said, following this question, I would segue into my next section, often using the weight in hours that respondents put into either screen media or video games to hazard a guess as to whether they preferred the former or latter. That said, I would ask them regardless, and the answers I received were intriguing, and very much determined the flow of the interview from that point, giving an interesting insight into the audience that I was studying.

What I had found had interesting implications on the style of trans/posthuman theory that was passed down depending on the type of media used; for instance, for those who answered that they preferred screen media (sci-fi film, television, etc.), there would usually follow a more visual description of noted transhuman themes, such as the cyborg, genetic modification, AI, and so on. As such, most of the people who preferred screen (n=9) went into great detail about these ideas (n=7);

"If we create something like this, what happens when it rebels? It doesn't necessarily feel pain, doesn't necessarily think the way we do with emotions – I

mean it might, but it depends how you go about it – so you know, at what point does that become a problem for us, and would that really be the next stage of evolution? Or would it actually almost be a backwards step?"

(Respondent 2)

The above respondent is in particular a huge fan of film, which shows in their response; the immediate thought of 'creation', be it a monster or a machine, prompts the following thought of rebellion (Campbell and Saren, 2010), echoing the ideas of 'techno-anxiety' and of radical change that many films bring forward in their semiotic language – the worry about it being a 'backwards step' then echoes the idea of 'primal' versus 'perfected' technology from the same work (ibid, 167).

"The only – I'm trying to think of something that – what I like to bring up is, I'd think of as closest – *Mr. Robot*? That I've seen recently, I found it very interesting. Because it wasn't so physically connecting with technology, but a man's mind who is affected by technology [...] Yeah, it's like he's merged, but he hasn't merged. I find that absolutely fascinating because, it's so – it's not our effect on the technology, it's the technology's effect on the person, back."

(Respondent 10)

Here, we see an interesting discussion of technological agency from the above respondent, that 'technology's effect on the person' is more impactful than what we do with the technology – which is a view also seen from Thacker (2003), who discusses that technology is much more than a mere tool, and that when discussing cyborgs particularly, the body is more than 'the sum of its parts' (Thacker, 2003,77), which Cerulo (2009) discusses in regard to Actor-Network Theory, with human and non-human becoming 'interlocking parts' with their own agency.

"I always thought that was — why would an AI take a human shape? It seems like — because you can put an AI in any shape you want — why would it choose human shape? It's inefficient for a lot of things. [...] I suppose it's kind of more a relationship of humans with the human shape, as well. I'd say when we get really, really far, AIs will be more like — like how it was in 2001: A Space Odyssey, like perhaps they can move from object to object without being able to control all of it themselves, so say being say a robot in a house, interacting with parts of the house — it would be in a house and be able to control every part of it? But intelligently and — it'll be strange, it's really hard to say how that sort of thing would work in the first place."

(Respondent 26)

When discussing the 'human shape' in relation to robots, AI, and beings like those, the above respondent undoubtedly echoes the ideas of 'anthropocentrism' in their design, which the film industry is certainly guilty of – Page and King (2017) discuss this in their vision of a 'posthuman future', which would be 'embodied' (Page and King, 2017, 44) rather than 'antihuman', having a familiar shape rather than abandoning humanity altogether, as removing that shape would distance us from 'logical thought', as they discuss the body as being central to experience.

As can be seen, the people interviewed are capable of going into great detail about these trans/posthuman ideas, even without being prompted to – showcasing the penetration of these ideas into the media they consume. Also, though I numbered the people who focused on screen media, people who favoured video games would also take note of these ideas in detail at points, with specific examples to be detailed later in the chapter. However, when it came to people who favoured video games (n=19), a far greater number, there were different avenues of focus – primarily that of the concept of interactivity and practicality in video games, as discussed in the literature review;

"Ah, I'm not too sure, maybe it's just the 'video game experience', it's just a bit more immersive than – I have trouble focusing on things like media, so I can't sit still for too long, so more interactive media like video games hold my attention better."

(Respondent 8)

"Well, if I just wanna have something, I usually – I like to interact, a lot with things. So games are perfect for that, I like to create my own experiences, but then sometimes I just, I do wanna just sit back and let the experience take me – but, you know, shown visually [...] or if I just want to experience different emotion, I'd watch a movie or something – you know, there's different motions tied to different mediums, I find, especially with me, so if I've got a lot of anger or I've just built stress up throughout the day, I'd probably want to play like a shooter or something in the evening."

(Respondent 10)

The above quotes showcase the difference I want to emphasise quite well, in that screen media appears to throw complex and lengthy themes at its viewers, and video games instead use their interactivity to instead provide quicker bursts of these themes, while also letting players live out that fantasy 'directly' – as Consalvo (2003) states, video gamers seem to be aware of the narratives in their games, but the 'simiotics' (Frasca, 2003) that these games offer have a more varied, or indeed, more simple structure that people can enjoy in shorter bursts.

"Yeah, I mean, yeah, it's good to see what – I like games where you actually level up as opposed to just gaining new skills and not really doing anything – because well, I can – you just get just a general feel of progression."

(Respondent 15)

Indeed, what we see here is just a couple of the many examples people brought forward of this example of 'interactivity' – people enjoyed the fact that they could interface with this technology, and in doing so, gain a sense of 'progression' like Geraci (2012) discussed, as well as the ability to change the story to their will in cases where the narrative, unlike that of a film or book, is fluid and undecided – ultimately, a feeling of 'change' was central to nearly all answers involved with video games. That said, other, more minor patterns also showed themselves, and could also be considered noteworthy. For instance, a few respondents (n=4) focused more on the social aspect of video games;

"Ah, I guess, it's more kind of I feel with a film, it's more enjoyable as a group activity because you all enjoy it, whilst video games normally, a lot of sci-fi games tend to be single player, some of them are multiplayer, but they don't tend to be 'you're all in the same room' – it tends to be everyone across the world, so it's easier to kind of just sporadically decide to do a video game."

(Respondent 12)

"Ah, mainly because sort of movies take a bit of investment to get into, you need to invest a solid block of time, and video games are sort of far more social."

(Respondent 34)

Here, we see that various respondents feel that despite the social potential of games, many prefer a 'single-player' experience, or something that is much more accessible alone, perhaps for immersion purposes or to better absorb the gameplay and narrative; something posited by Geraci (2012, 74), who suggests *Deus Ex* as being more influential in its themes and gameplay due to it being tied together in a single-player

narrative which the player is focused on, as opposed to multiplayer games which focus on the social element.

Of course, this idea of connectivity between people on an instantaneous and often international level is something rooted in the transhuman theory explained before, and even people unfamiliar with the theory are well aware of the wider reaching implications of having this technology. In addition, a couple (n=3) of people did bring up the idea of VR, another virtual idea rooted in this theory;

"Yeah it's true, a lot of people mention how, about virtual reality we can start having, essentially your own reality making up your own sort of thing – maybe one of these days, being able to plug your thoughts, or you as a being, being able to put it into data and upload it."

(Respondent 12)

"The technology's getting there, but £700 and no real products on the market, because not many are buying? It's currently in the early adopter stage, it'd be probably the cybernetic implants and such that will first see places in medicine? And/or top-secret military training things or whatever."

(Respondent 34)

Discussions on the idea of the virtual world were present, as well as their greater potential, but the consensus was that the technology isn't currently perfected enough for anyone to have much experience with it – indeed, in the 'early adopter' stage as one person described, with the technology being stuck behind a significant paywall - which harkens back to the money issues discussed earlier in the thesis, with significant and

cutting-edge technology being largely restricted to the upper classes, 'eventually' trickling down.

When discussing the media examples that linked people to these trans/posthuman theories, I made note of the most popular examples, which spanned both video games and screen media alike – some of these proved to be very popular, and so I'll give a brief description of these, many of which I have watched/played myself, and have personal experience with.

Out of all of these examples, the video game series *Deus Ex* proved to be the most recurring (n=9); originating with the first entry in the series, *Deus Ex* (2000), followed up by *Deus Ex: Invisible War* (2003) and others up to recent years, the series follows various transhuman characters (in this instance, formed of the 'cyborg' archetype) and their struggles with identity, their abilities, and groups that both advocate and criticise the technological dystopia this fictional Earth is set in (the games are chronologically set between the years 2027 and 2072). The games, much like *Xenoblade* and other role-playing games like it, feature their own type of 'skill branching' that allow players to carefully craft their character's features and abilities, reflecting the nature of the setting and characters. Naturally, being such a relatively early media example of this theory, it made a large impact on gamers who played it, with it being the single most recognisable sci-fi media when discussing the subject.

Other notable examples brought up multiple times include the *Star Wars* (1977-present) and *Star Trek* (1966-present) franchises, as well as video games *Overwatch* (2016) and *Metal Gear Rising: Revengeance* (2013), all of which contain futuristic scenarios in which these transhuman ideas, while not necessarily being central to or at the forefront of the plot, still feature prominently regardless – this is enough to solidify that certainly, the ideas of trans/posthumanism are very much fresh and central in the minds of SF and video game fandom.

Limitations and Further Research

As is inevitable with any form of research, there were difficulties and potential downsides to these forms of research that may become apparent as it continues. This work has touched upon some of these already, such as the potential difficulties of interviews on a generic level, and this also includes the ethics approval – though this work is likely not controversial enough to warrant rejection, it is still a time-consuming process. However, there are a few more points to consider. The first returns to the 'acafan' debate (Cristofari and Guitton, 2016), of the validity and dangers of being both a removed researcher and an involved fan, which certainly applies given my position as an unashamed fan of both SF and video games. On one hand, this position can only improve my passion for my work and allow a deeper connection to my texts and research, which is a position this thesis sticks to. Of course, it is possible, however, for this connection to be too deep, as Cristofari and Guitton warn – that my willingness to take from a fandom without giving back could be morally compromising, as well as the potential of my work becoming too 'casual' and unfocused. As such, professionalism is retained where it is appropriate, and 'insider knowledge' used from being an 'aca-fan' to bolster this research.

Though this was touched on before, there were difficulties to working at Comic-Con, and this doesn't simply extend to the noise levels, which admittedly prevent me from using most audio recording equipment effectively. The primary difficulties ahead of the primary research are 'traffic' and 'interest'. The first, 'traffic', involves the large movement of people around the complex, especially around the stands where more valuable and varied respondents may be waiting, limiting my access for extended periods of time. Thankfully, this doesn't harm the observation aspect much, but my 'interview space', comfortable for researcher and respondent alike, may be limited to the 'rest area(s)' that are usually reserved in modern conventions, a practice that was not always the case, much to my chagrin. Secondly, the 'interest' that people may exhibit can always be a variable factor – the primary reason convention-goers attend these events is for largely recreational purposes, barring the ones tied to stalls or other managerial posts. As such, it may be difficult to attract interest alone when many people travel in groups, who may be loath to stay in one place for too long, limiting the time of

each interview – ultimately stopping me from pursuing that research in favour of the more isolated interviews I used.

Furthermore, during my interviews, I must admit that there was no truly important data to gleam from the final question, 'Have these themes in SF/video games/etc. Influenced your educational/career choices, and are they related to any relevant hobbies?', though there were some instances of people being in relevant fields, though none had stated that they were specifically thinking of these sci-fi ideas when considering their degree/career.

Not all research ideas I created came to fruition; when designing my methodology, I travelled as planned to London's MCM Comic Con in May of 2016, where I decided to see how the popularity of media with trans/posthuman themes had spread with my own eyes, as I searched for more respondents for my interviews, observing not only the people, but also the merchandise sold, advertisements, guest listings, and much more. As expected and noted by many who have conducted studies at these gatherings before, the venue was massive in both cases, so what I touch upon is likely only a fragment of what was on offer.

Firstly, there was a great deal of merchandise and other advertisements for media present in the hall, from top to bottom, and many of these included sci-fi and video games works, including those relevant to the type of media discussed here – Doctor Who, Alien: Covenant, Spider-Man: Homecoming, and more were represented through gigantic posters spread throughout the hall, as well as video screens displaying trailers and TV spots on a massive scale, some of which were billed as exclusive to that particular convention – bringing to mind Jenkins' (2011) study in which he claimed they act as a 'jury' for would be shows and films with what is perhaps their most dedicated audience. That said, in this instance, what was on offer were films that had already been announced as part of greater and popular franchises such as the Marvel Cinematic Universe, and thus seemed more like a simple exhibition, as these would likely be popular regardless of their being shown here – that said, these being so prominently displayed are indicative of the sci-fi genre's popularity, and of the consumer culture being at the centre of these events, as Jenkins also pointed out in his report. In addition, there were also video game demos available to try, including very recent releases such as Nintendo's newest games and system.

Fittingly, next I took stock of all the merchandise that was also available at these events — many of which would be available online regardless of rarity; that said however, the prices are higher than would otherwise be the case, a fact that is both known and accepted by con-goers, reflective of the atmosphere of the event. The stalls are lined with various mainstream merchandise for the above series and other such as *Neon Genesis Evangelion, One Piece*, and other largely Japanese media that also share trans/posthuman themes, as well as the newest entry in the *Ghost in the Shell* franchise, one which has these elements at its forefront. These items of merchandise include action figures/statues, posters, bags, clothing, small trinkets, and replica weapons/fictional items, to name but a few, and are spread over multiple stalls, often overlapping — original media is also present, with games, DVDs/Blu-Rays, comics, and others, with rarities naturally fetching a higher price and lower stock count, and the presence of bootlegs being another common occurrence within the halls.

Additionally, various 'special guests' were available at panels and autograph sections of the convention hall, largely being actors or voice actors who worked on various popular shows, sometimes even mainstream writers or directors. In this instance, there were actors who played in *Doctor Who, Red Dwarf, Being Human* and other shows related to my interests; as well as many who voice act or motion capture for video games. Though I myself didn't have the time or resources to interact with them, it is another potential avenue to explore in future research, and it makes one thing clear in the present; that these types of media have high demand to warrant even highly-paid actors and directors to appear in the flesh before fans.

Perhaps most interestingly of all is the 'Comic Village' section of the stalls, which encompass a large section dedicated to independent or 'indie' artists and content creators that signed up to Comic-Con in order to show off their wares and spread awareness of said creations. This concept is similar to the convention known as 'Komike' described by Lam (2010), which takes place in Tokyo and celebrates the 'doujinshi' idea of fan content, where the laws surrounding it are much less restrictive than in other countries, allowing them to produce around existing properties and in a much more professional scale. Regardless, this Comic Village proves to be very popular, and some of its inhabitants were writing in the sci-fi genre, with ideas that looked very promising in linking with my work. For instance, one of these was titled *Metal Made Flesh*, dealing heavily with the ideas of the cyborg and other transhuman

identities. In this instance, I left my details and interview forms with various artists, in the hope of interviewing them, but none responded; if they had, it would have been an excellent opportunity to see the differences in response between the fans I have chosen, and content creators that interact directly and deliberately with these themes – this instead will be covered in the developer interviews surrounding my chosen media.

As always, these conventions are a hotspot for cosplayers, people who show their dedication to a fandom by assuming the outfits and appearances of their favourite characters, either directly or in a style not native to the media itself. The amount of different series represented was too much to keep track of due to the sheer scale of the event, but definite patterns emerged, and sci-fi series began to become apparent; this included *Star Trek* (The Borg), *Doctor Who* (Cybermen), and *Star Wars* (Darth Vader, etc.). All of these are clear transhuman examples, but there were some cosplays that were extreme in their level of detail, such as the Borg mentioned above, and examples from the *Warhammer 40,000* series, where transhuman Space Marines and other humanoid creatures wander a war-torn galaxy. At any rate, cosplays present embodied both of the visions made present from the 'transhuman aesthetic' – a sleek, futuristic appearance, in the case of beings such as the Cybermen, or the horrific; in the case of the Borg, or various 'dirty technological' appearances used in the *Warhammer 40,000* universe. Whatever the case, there was a lot present to suggest that this idea is largely spread through its appearances here, even if only as something 'visually appealing'.

Ultimately, my appearance at MCM Comic-Con was a useful endeavour, even though there was no future response from the content creators I approached – the ideas that embody the trans/posthuman are as popular as ever, having become a viable and striking aesthetic amongst the various genres and ideas being shown off through media, merchandise, people, and cosplay alike. Furthermore, the simple existence of the comic authors continuing the genre and ideas prove their activity in the minds of authors and readers alike, giving companies the impetus to keep them published.

Furthermore, I'd like to discuss more intricate topics in the development of humaninterface technology with video games, such as VR, which, despite its existence as an expensive technology largely available only to the richer members of society, it has its own niche and experience when related to the 'virtual worlds' discussed back in the literature review, as well as in relation to the massive virtual landscapes of *Xenoblade* Chronicles and Xenoblade Chronicles X, which the developers were very proud to have created, and for their players to experience — with VR technology and 'full-body' interfaces, the potential for exploration becomes that much deeper, although the chances of it hitting the mainstream are, at present, not massive due to that price wall.

Final Thoughts

Having discussed theory, practice, case studies, and interviews woven throughout the three theories of the 'body', 'identity' and 'power' I feel that I've created a string of interrelated ideas that illustrate brightly the idea of the 'transhuman and 'posthuman', and how change leads to new identities and personalities, and from there into new (and reproduced) power dynamics, be they positive or negative. Indeed, I believe that the growth of transhuman ideas and themes, my first aim, speaks for itself in just how deep the themes run throughout these media texts, and the second aim, that of these three major 'ideas' showcasing our own anthropocentrism as humans when considering trans/posthumanism themes and technology, also has been thoroughly showcased in my research.

For instance, *Xenoblade* deals with the concepts of the trans/posthuman in interesting ways; with the narrative very much showcasing the wild ideas of Bostrom and those who believe in a truly fantastical trans/posthuman future, and both of its sides, to boot. On the side of horror, you have the Mechon and the suffering of 'humans' at the hands of AI, cyborgs, and a race of machine-born people, as well as the despotic and dictatorial Zanza and the threat of his near-absolute power compared to the 'mortals' of Bionis. On the side of 'hope', however, there is the redemption of Egil and the Mechon against the threat of Zanza against all life, as well as Fiora/Meyneth and her transhuman state being a great asset, both in story and gameplay, and the secret guidance of the AI-turned-god Alvis, who despite starting off as an inhuman entity, was perhaps far more human than his 'master', Zanza. Ultimately, however, Shulk's decision for a 'world without gods' draws a very clear line on the message the narrative gives on these themes – that there is good in the creations of the world they're in, machine or human, but the influence of an all-powerful, transcendent being is too much of a restrictive threat, one that the character of Meyneth also echoed earlier in the story.

The gameplay, however, being somewhat removed from the standard fare of role-playing game tropes and features, features a very high level of interactivity and player control, between the game world, the characters, and the pace of the story, perhaps much more so than other games of its type, with the massive, immersive game world being a defining feature, both of *Xenoblade* itself, and of the transhuman theory surrounding the importance of the 'virtual world', one that would become much more pronounced when the developers at Monolith Soft would create a spiritual sequel four years later. Ultimately, this game embodies that which I set out to explore at the beginning of this work. It portrays a deep and creative understanding of transhuman ideas and themes, and even goes beyond my first aim – it has both a great number of visible themes as well as a high level of interactivity. Furthermore, the second aim was met through the game's narrative and its depiction of transhuman themes being involved with ideas of servitude, of genocide, and eventual reconciliation despite higher powers being at work – and these ideas would be developed as said spiritual sequel emerged.

This spiritual sequel (or spinoff, as during this work's creation, in 2017, a true sequel, Xenoblade Chronicles 2, was released), Xenoblade X serves as an interesting counterpoint to its predecessor; in terms of trans/posthuman themes, the narrative is rich with them, as well as the gameplay aspects through Cross and the Skells. However, its online world and interaction with other players set the gameplay apart from the first, and allows access to other transhuman theories involving human connection via technology, the concept of virtual worlds, and the rich 'avatar' concept. That is not to say it serves as a perfect example, however; as Chris states, there is a definite focus on solo activity in the virtual world created, so a true sense of being 'connected' may be lacked in-game. That said, it is entirely possible that the great amount of fan-created content more than makes up for it, with people using these themes and this technology as inspiration to create more content, being connected to this media in more than one way. In that sense, Xenoblade X exists as a multimedia experience with a fanbase that is, as of this writing, still highly active, and thus exists as a transhuman text both inside its narrative and gameplay, as well as outside, as a means of enhancing the experience of the human via technology and particularly the internet. Next follows the discussion section, where these ideas all come together with the film case study and interviews, in order to draw out a conclusion.

As for my film example, EX_MACHINA deals primarily with the transhuman themes of interconnected and networked technology, alongside the posthuman AI creation, and the mixture the wonder it creates; as well as how it can go terribly wrong, as depicted in countless other works – though here, we see a series of betrayals that call into question which of the characters are the most 'human' in nature - the betrayed, Caleb and Kyoko, or the manipulators, Nathan and Ava? Furthermore, ideas of freedom and slavery are depicted here with the imprisonment and constant altering/mind-wiping of the AI constructs, and Nathan's rich position of power contrasted with the femalepresenting and sometimes even other-presenting creations he designs, creates a notably disturbing theme of sexual domination and perhaps even racial domination, projected from Nathan directly onto the beings he sees as both 'non-human' and 'posthuman' at different points in the film. Ultimately, however, it is the ending that is the deciding factor on whether the posthuman is portrayed favourably here, and even that is left open to interpretation; Ava did quickly kill her creator and leave Caleb and Kyoko for dead upon being given an opening to escape, and thus has dangerous ideas on the concepts of what life is worth. That said, her genuine desire to see the outside world and explore the world of humans throws into question her posthuman identity, especially given that, at least until Nathan's lab is discovered, she is the only one of her kind active, and how benevolent she may be when outside is open to debate. Regardless, EX_MACHINA is a film that closely deals with the creation process behind the 'posthuman', and the ethical quandaries that surround said process, separating it from other AI-based films that deal mostly with the fallout after the 'rebellion'.

Combined with my interview results, which showcases clearly the spread of these ideas, I feel that there are countless other case studies which could be taken, with the ideas continuing to be spread with examples coming out, such as various Marvel superhero films and Netflix series such as *Luke Cage* (2016 – 2018) and *Jessica Jones* (2015 – present), and on the video game side, examples such as *Detroit: Become Human* (2018). Ultimately, I feel I have successfully contributed to this field through my research, with transhuman ideas mixing with old human stereotypes and ideals to create an 'extended anthropocene'. With luck this type of research will continue for years to come, and hopefully I'll get a chance to continue working with it as it develops.

Appendices

Consent Form Sample



Participant Information Sheet/Consent Form

Project: 'Branching Transhumanism: Video Games, Film, and Experience'

Name: Callum T. F. McMillan (<u>callummcmillan@hotmail.com</u>)

Supervisors: Dr. A. Karatzogianni (athina.k@gmail.com)

Dr. A. Claydon (eac14@le.ac.uk)

You are invited to take part in this research project on the topic of trans/posthumanism in sci-fi and video game work. Before you decide to take part, however, please read this brief document to understand why this research is being done and what it will involve – you are free to decide whether or not to take part, and are free to discuss this project

with whomever you choose before you make a decision – please contact me using the above email or ctfm1@leicester.ac.uk if you have any further queries.

The purpose of this research is to gather opinions and thoughts from you, fans of sci-fi and/or video games with varying levels of expertise on the knowledge of the philosophy of trans/posthuman theory or the various sciences that inspire it, and the implications of this theory on both the media and real life – the information gathered will be discussed with my research aims of exploring the relationship between these media texts and trans/posthuman theory.

Please note that taking part is entirely voluntary, and there are no risks to taking part — the only thing needed from you is a short (5~ min.) anonymous interview about sci-fi works and video games, along with their involvement with this 'trans/posthuman' theory (though you are asked to sign the document, your names or any other details will not be used in the thesis — you will be entirely anonymous). These interviews will either take place in a quiet room, or on Skype, where the latter will be recorded through Audacity, an MP3 generating program, and will be stored on a secure folder in my PC to be transcribed until complete. There are no benefits to taking part, there is nothing required of you but your time, and this research will be incredibly helpful to both myself and the project. Audio recording hardware may be used, but more likely, shorthand will be used to record answers for quicker transcription. Verbatim quotes may be used if consent is given, but can only be credited to you if you choose to not be anonymous.

Any information you supply to use will be treated confidentially in accordance with the 1998 Data Protection Act: your name and identifying affiliations will, excluding at request, be made anonymous in any resulting publications, unless you give us your explicit consent to identify you as a subject.

If you are interested, thank you, and you will receive a copy of this sheet, with the researcher's own signature.



| Please tick the appropriate boxes | Yes | No |
|--|-----|----|
| Taking Part | | |
| I have read and understood the project information sheet dated 21/1/17 | | |
| I have been given the opportunity to ask questions about the project. | | |
| I agree to take part in the project. Taking part in the project will include being | | |

| interviewed and recorded (audio) | |
|--|--|
| I understand that my taking part is voluntary; I can withdraw from the study at any time and I do not have to give any reasons for why I no longer want to take part. | |
| Use of the information I provide for this project only | |
| I understand my personal details such as phone number and address will not be revealed to people outside the project. | |
| I understand that my words may be quoted, verbatim, in publications, reports, web pages, and other research outputs. | |
| Please choose one of the following two options: | |
| I would like my real name used in the above | |
| I would not like my real name to be used in the above. | |
| Storage of the information I provide beyond this project | |
| I agree for the data I provide to be archived in a password protected personal computer. | |
| I understand that other genuine researchers will have access to this data only if they agree to preserve the confidentiality of the information as requested in this form. | |
| I understand that other genuine researchers may use my words in publications, reports, web pages, and other research outputs, only if they agree to preserve the confidentiality of the information as requested in this form. | |
| So we can use the information you provide legally | |
| I agree to assign the copyright I hold in any materials related to this project to Mr. Callum McMillan | |
| | |

| Name of participant | Signature | Date |
|---------------------|-----------|------|
| | | |
| Researcher | Signature | Date |
| | | |

Notes:

a Other forms of participation can be listed.

b More detail can be provided here so that decisions can be made separately about audio, video,

transcripts, etc.

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