Anime:
Fear and Anxiety in Texhnolyzed Worlds

Texhnolyze, 2003, Hiroshi Hamasaki, Madhouse, 550mins

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<u>Abstract</u>

This is a study of primarily post-millennial Japanese Anime texts, drawn from the science-fiction genre of the medium. The key interest of this study is the prevalence of the dystopian attitude toward technology that has prevailed in sci-fi for several decades now, and is a key marker within Anime, notable for its fetish for cathartic destruction and apocalypse. This study addresses a gap in academic literature on Anime which is largely focused on key 1980s and 1990s sci-fi texts. To this end, three key examples of post-millennial sci-fi Anime television series are examined alongside other significant and similarly themed texts for their continuities and innovations to the themes and style of the genre. Of particular concern are nuanced changes in technological attitudes that can be seen occurring in the apocalyptic mode that the key texts make use of (which is a well-established premise within sci-fi Anime), as well as an increase in supernatural and fantasy elements. The key texts are as follows: *Wolf's Rain* is a shamanistic and bio-technological fantasy epic. *Texhnolyze* is the spiritual successor to *Serial Experiments Lain* with heavy themes of cyberization, evolution and ideological diversity. *Ergo Proxy* is by far the most complex, being a post-cyberpunk text that embodies concepts of artificial intelligence, genetically engineered societies, psycho-analysis, the technological deity and much more. These texts are reflective of the somewhat limited but convenient dichotomy that divides the many socio-political camps that oppose and promote technology into bioLuddites and Transhumanists. The concept of 'hybridity' draws these divisions under a unified umbrella, describing humanity's destabilizing and redefining amalgamation with the technological 'Other'. It also represents the fusion of science and technology with religion and spiritualism which affects the post-human hybrids of Anime. The hybrids that are portrayed are the cybernetic entity and the genetically engineered life-form. This study intends to reveal how several post-millennial sci-fi Anime, following on from their predecessors, act as a metaphorical, social, and ideological critique of the continued technological encroachment upon the human body and psyche, expressing both revolutionary theories and cautionary tales in its narratives.

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Introduction:

> Homeostasis and Transistasis. One is a force for constant change, the other is a force for things to stay the same. – *Neon Genesis Evangelion*.

This little anecdote captures succinctly the human mentality that belies attitudes to technology seen in science-fiction Anime over the last twenty to thirty years and even longer. Within the science-fiction genre, Anime has played a distinct and unique part, exemplifying ambivalent attitudes towards advancements of technology in the last few decades. This sense of uncertainty is nothing new to humanity, as every product of human engineering and innovation has created to some degree a sense of unease in the people it affects. "The chemical or physical inventor is always a Prometheus. There is no great invention from fire to flying which has not been hailed as an insult to some god" (Hughes, 2004, p. 75). Thus the post-millennial time period is simply part of a long continuum of technological development accompanied by varying levels of social trepidation. Not without cause, this is an age that is seen as possessing the potential for great enlightenment or great destruction, or possibly both. Many imaginations have attempted to conjure and speculate upon the twenty-first century and much musing is still going on. Science fiction for over a century now, via an array of print, audio, and visual mediums, has driven popular imaginings of the future world we may one day live in. In the context of this study, both America and Japan have produced a myriad of authors and auteur responsible for creating a vast amount of texts on the human obsession and antipathy towards technology, but in very different ways. America, particularly in its films, has maintained a dominant patriotic but two dimensional 'us versus them' discourse of technology, specifically in regard to the machine, and rarely touched upon the potentials and consequences of technological development alternative to the dystopian or apocalyptic mode. Japan however has consistently been and continues to remain ahead of the imaginative curve, creating technological worlds that are beautiful, abstract, alien, or obscene, or combinations of the four. However, though there are differences in their concerns and portrayals, the perceived threat is the same; the radical affects of technological development on society and everyday life. As Antonio Levi puts

it; "Both have nightmares as well as dreams about the future applications of such technologies, and both bring those nightmares and dreams to the screen" (Levi, 1996, p. 95). While the aesthetic and visual qualities of such worlds are not in question, for this study the medium of animation is being considered as a vehicle for expressions of social theory and ideology regarding technological development and the aspirations and anxieties therein. With this philosophical and theoretical frame of mind, science fiction, in this case Anime, is being considered as a social marker of changing trends and attitudes toward accelerating technological development.

Much of science fiction became increasingly reactionary to the utopianism of the nineteenth and early twentieth century toward technological development. Examples of this include Fritz Lang's *Metropolis* (1927), Aldous Huxley's *Brave New World* (1932) and particularly George Orwell's *Nineteen Eighty-Four* (1949) which cemented the popular vision of the dystopian future. However during this same epoch there was still a vein of authors who despite the fact that industrialisation had failed their predecessors, still chose to conjure up idealised worlds, at least for the far future, such as Isaac Asimov and Arthur C. Clarke.[1] In general there remained a train of thought paralleled between Japan and America that believed technology paired with social change could greatly benefit mankind: "Like the Japanese most Americans in the 1960's wanted to believe that human beings could duplicate Mother Nature's work, and probably do it better. That dream died in America and it's begun to die in Japan too" (Levi, 1996, pp. 87-88).

It wasn't until the nineteen eighties however that the dream almost entirely dispersed in the West, and greater quantities and levels of pessimism started to proliferate. The appearance of such titles such as Alan Moore's *V for Vendetta* (1982) and *Watchmen* (1986), Ridley Scott's *Blade Runner* (1982), William Gibson's *Neuromancer* (1984) and the advent of the subgenre cyberpunk within science fiction, created the embodiment of a dystopian future.[2] Cyberpunk particularly created a future-scope that was closer to home, as it dealt with the near future and changes that could take

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[1] Even explorations of totalitarianism persisted, such as Robert Heinlein's *Starship Troopers* which envisioned a future interstellar militaristic human society.
[2] Fittingly this occurred during the era envisioned by Orwell as the 'surveillance society', now a fleshed out concept taking affect in the real world.

place in society within a foreseeable amount of time given the now rapid development of technology particularly in regard to communications and globalisation. The following is one apt description I have come across regarding the genre.

> Cyberpunk is centred around computer technology and the breakdown of normal society in the near future. Unlike the Utopias of earlier science fiction, the civilizations of cyberpunk novels and short stories are dystopias, where law and order have ceased to exist, huge corporations control the resources of the world, and hackers and crackers are the lone gunmen struggling against the governing elite. Cyberpunk fiction is known for its cynical outlook on society and its glorification of the solitary brilliant rebel… One of the most important themes of such stories is the connection between human minds and computer systems (Gresh and Weinberg, 2005, p. 143).

According to Ruh the parallels that had already existed between the West and Japan drew closer, due to post-war Japan becoming the epicentre for burgeoning technology, "Beginning with Neuromancer, cyberpunk literature has tended to fetishize Asia, and Japan in particular" (Ruh, 2004, p. 127). Many of these texts presented particularly grim visions of the future, or at least great changes due to the presence of technology in people's lives and relationships.[3] "The time has long past when the premise for science fiction was an immeasurable faith in science and the future" (Hiroki, 2007, p. 77). This failure of science and technology to ensure civilisation a future secular utopia and the resulting pessimism and even nihilism to which modern science-fiction keenly alludes, has resulted in an elegiac trend in literature of this time period. This is notable particularly in the United States where what might be termed a religious renaissance has occurred, with traditional religions experiencing increases in growth and fervour. Many of these organisations are confronting the ideals of liberal secularism, especially following the advent of bio-technology which has become an ideological battle-ground. Likewise theistic themes have prominently reappeared in science-fiction, especially Japanese Anime, pertaining not only to concepts of deity, but also to forms of primalism

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[3] Many in fact drew on post-apocalyptic visions, which given the culmination of World War II: the atomic bombing of Japan, and a subsequent Cold War which entailed a nuclear arms race, such sentiments seemed quite natural.

and other primitive and nature-based forms of spirituality. Despite these changes, the role of science-fiction in regard to technology has remained constant. From its earliest days to its current status it has and continues to be a means of critique and speculation upon the continued encroachment of technology into society and how such changes blur the traditional definitions of humanity. Anime places conjecture on the many positive, negative and ambiguous affects of all manner of technologies that are actual, exaggerated and contrived. This is relevant to both Japan and America and is apparent in sci-fi texts from each culture, and as Takayuki puts it in the case of the Americans, "only SF (science fiction) and quasi-SF authors were dealing with the most crucial aspect of contemporary American life- that is the growing impact of technological change on the lives of ordinary Americans" (Tatsumi, 2006, p. xx).

The point here is many of the themes in science fiction, and within its Anime counterpart, particularly following the cyberpunk era, are allusions, metaphors and direct references to anxieties people are experiencing due to "increased contemporary issues such as technological development, gender identity and relationships between the sexes" (Napier, 2005, pp. 10-11). Again Japan and America make an interesting pair as both have been engaged in ethical quagmires of technological practice with both similarities and differences in their varying moral standpoints. For example "Many American secular humanists believed abortion and euthanasia of the brain dead were acceptable because self awareness gave human life meaning" (Hughes, 2004, p. xi). This attitude however flew in the face of the Religious Right and Pro-life movements in America. On the other hand "The Japanese had little problem with abortion. In fact Japanese women often turned to Buddhist monks to perform rituals to clean up the bad karma" (Hughes, 2004, p. xi). The concept of brain-death however was a greater topic of contention, as were organ transplants. In 2004, Japan still had no brain death law and reactions to organ transplants remained "based on a deep visceral repulsion born of Confucian beliefs regarding the need to go whole to one's grave and Shinto ideas about physical purity" (Levi, 1996, p. 93). Why such moralising has become so poignant to Japan and America and why I've chosen to contrast their concerns here is due directly to the fact that both have promoted themselves globally as being technologically advanced nations in fields such as robotics.

Indeed "By 1980… Japan had more industrialised robots than any country. In fact it's been estimated that fifty percent of all the robots in the world were in Japan at the time" (Gresh and Weinberg, 2005, p 39). And not only that observe Gresh and Weinberg, "After decades of being promoted by pop culture, comic books and cartoons [and of course Anime], exoskeletons are on the verge of becoming a reality. At least if the U.S. government has anything to say about it"[4] (Gresh and Weinberg, 2005, p. 69). The development of 'mobile suits' however is rather non-contentious and morally neutral as opposed to the ability of technology to sustain and abruptly end life, but both have evoked deep-seated emotional reactions in various groups of people, inciting excitement, disdain and sympathy. What makes post-modern concerns distinct however is that they directly relate to the questions 'what defines life?' and 'what defines human?'

It is these questions that are at the forefront of twenty-first century technology. Robotics seems benign until you combine it with the incredible advancement of computers. At what point does a machine become intelligent enough to be regarded as sentient?[5] "If an artificial intelligence generates its own soul, is the machine human or mere machine? That is, do you have to be born with a soul or can you create your own? … we're confronted with the question: Just what is a soul" (Gresh and Weinberg, 2005, p.93)? Conversely and currently of more noticeable prominence, is the mechanisation of the human. Mechanical and electronic augmentation and replacement of human body parts is fast becoming commonplace, from hearing aids to robotic limbs, all of which may eventually be wired directly to the human nervous system. Then there is the advent of the internet, online communities and the development of 'virtual reality', the digitization of perception and even memory. Concerns occur when the continuation of such a trend is posited. At which point does a cyberized human pass from its human state to a purely mechanized and digitized one? "The cyborg or robotic body is therefore simultaneously appealing and threatening, offering power and excitement at the expense of humanity" (Napier, 2005, p. 88). Then of course there is question of what the relationship between

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[4] Planned dates for when such technology will be viable may have to be put back however, given the time of writing of this thesis and the 'calls' for such a project to be complete by two-thousand and ten.
[5] Such questions have led to the development of the Turing test and theories on how artificial intelligence might be structured, or even the myth/theory that it might occur naturally without direct human intent at all.

humanity, cyborgs and AI will be. According to the majority of American and Japanese science-fiction texts: messy.

Biotechnology throws the final spanner in the works of the human identity crises, forming yet another mountainous wealth of possibilities for fantasists of future human forms to draw upon. This has led to the development of 'Personhood Theory'; that only self-aware persons have rights, that not all humans are persons and not all persons are human. This creates a new dimension in a world where the current definitions of human rights are not universal. The concept has already found its arch-rival in what it terms 'human racists' and 'Bio-Luddites', those who only confer citizenship on non-altered humans. Again, it is the fact that the 'human' may become unrecognisable that is the key concern, which leads to different priorities in the definitions of our selves. This struggle is one that on multiple points and levels idealises, questions and opposes what could one day be the right for the individual to enhance and alter their bodies and minds entirely as they see fit. These are the attributes of a theory called 'Trans-humanism', or 'Post-humanism', which "might be defined as that which seeks to revise or overcome conventional notions of the human by blurring the lines that divide us from these non-human alternatives" (Bolton, 2008, p. xi).

Philosophically, this is where all such technologies converge; at the event horizon of the post-human, offering potentials that scientists, intellectuals and authors have been spending much time pondering. In such context, James Hughes seems to capture both the horror and glorification of the post-modern era thus:

> In the 21st century the convergence of artificial intelligence, nano-technology and genetic engineering will allow human beings to achieve things previously imagined only in science fiction. Life-spans will extend well beyond a century. Our senses and cognition will be enhanced. We will gain control over our emotions and memory. We will merge with machines, and machines will become more like humans. These technologies will allow us to evolve into varieties of post humans and usher us into a "transhuman" era of society (Hughes, p. xii).

So what? This, in a nutshell, is the counterpoint to such illustrious ideals. What do such accomplishments solve? All manner of human and environmental issues remain unsolved

despite what seems an equal number and variety of technological developments. Napier argues that science and technology have come under scrutiny due to their inability to provide stable solutions to the issues facing humanity, a mentality that has become particularly poignant in the new millennium.

> It seems safe to say that the last decade of the twentieth century ushered in an increasing disaffection with technology. … It (technology) seems less able to provide the satisfying future that utopian science fiction used to promise. Problems such as environmental degradation, economic downturns, and war appear increasingly intractable, with science seeming to suggest little in the way of overall solutions (Napier, 2005, p. xi).

This ensuing dissatisfaction has resulted in the re-emergence of traditional religions and conservative values to political and cultural spheres. Yet it is the failure of the concept of the secular utopia that has allowed theism a strong influence in society that is particularly noticeable in America. In contrast, Japan's social tensions are less religious in nature and more to do with what Napier cites as the "transformation and detraditionalization of Japanese society" (Napier, 2005, p. xvi). It is no real surprise then that the media produced by each has reflected this, both in science-fiction and the renewed popularity of fantasy. This can be seen in Western film, and Anime too has experienced "a turn away from science fiction to fantasy" (Napier, 2005, p. xv). But while such texts may represent either a society's need for escapism or its indulgence in elegies of the past, it is still science-fiction that provides the most interesting and intricate themes and symbolism regarding change and resistance and the intertwined and often blurred themes of destruction and evolution, deification and naturalism. It is these aspects, paired with unique styles and aesthetics that have caused Anime to catch literary and academic attention. "The interplay of nature, society, culture and technology forms the shifty matrix within which reality as we know it is constituted" (Taylor, 2008, p. 4). Anime has and continues to capture these intricacies, superbly creating vastly different worlds, often with more ambiguities than conclusions, which reflects the Japanese nation's multitudinous attitudes to technology, and is why it is this medium, genre and time period I have chosen to study.

Anime has a long history of its own, beginning really in the nineteen-sixties. It possessed its own science-fiction aspects, which becomes immediately apparent when one considers Osamu Tezuka, the 'God' of Anime and Manga in Japan, whose most famous stories were about, "the first *mecha* to get the green card" (Levi, 1996, p. 85); Astro Boy, a sentient robot. The advent of cyber-punk created a mutual interest between America and Japan in dark hyper-technolised worlds with a science or pseudo science basis, and driven by speculations and hypothesis on social change. This sympathizing is quite understandable considering "Americans and Japan share many of the same concerns about runaway technology, artificial intelligence, robots, genetic engineering, and cyborg parts" (Levi, 1996, p. 95). So it was in Anime that a deep level of contemplation for future-world-scapes and dazzling but often dark and gloomy artwork has gained appreciation in the U.S. and became an offshoot of interest from universities and science-fiction conventions. Both have subsequently come to reference each other; the 'science fiction classic' *Neuromancer* (1984) has become "a major influence on Japanese science fiction in general" (Napier, 2005, p. 11), as has *Bladerunner* (1982) which has also become an epitome of cyberpunk. So it was perhaps no surprise that Western interest in science-fiction Anime appeared in the wake of such a genre. This began with the release of *Akira* (1988) to America and Europe for the first time in 1990. Its heavy post-apocalyptic themes and at the time cutting edge cinematic animation was something the West had not seen combined before. "Akira is a complex and challenging work of art that provoked, bewildered, and occasionally inspired Western audiences" (Napier, 2005, p. 5).[6]

This was followed not long after with what "has become one of the most analysed anime films by Western academics" (Ruh, 2004, p. 122); Mamoru Oshii's adaptation of Shirow Masamune's original manga, *Ghost in the Shell* (1995). It is also considered to be "one of the high points of the Anime medium and of the best known anime films in the West" (Ruh, 2004, p. 6). Like *Akira* (1988), it has a very cinematic framing, and like a lot of Anime at the time, made much use of the same techniques used in live action film

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[6] It entailed themes not only of apocalypse, but of political dissent, militarism, evolution, and most prominently; juvenile delinquency. Such over-arching themes had certainly been evident before in the West, but in novels such as *Starship Troopers*, not in animation which had up until then been considered (and largely still is) a children's arena.

production, such as panning, zooming, and tracking shots. It also had quite a slow pacing and was driven by lingering shots of city-scapes which showcased the film's high-end animation style and use of CGI which had not been seen in use so prominently before. The success of the film has led to another interpretation of the manga via an animated television series and another animated movie, both of which Oshii has at least contributed to. The franchise remains arguably the most famous Anime in America.

The next text to garner similar fame but also notoriety and engender endless debate is undoubtedly Hideaki Anno's *Neon Genesis Evangelion* (1995). The series is at once subversion of an archetype within the mecha genre of Anime; 'the boy and his robot', and of Judeo-Christian mythology. It is also a deep exploration of the psyches of the various protagonists who all exhibit varying degrees of psychological disorders. The sex and violence it contained courted controversy in the public arena, and its ambiguous and abstracted conclusion caused an outcry with even its most ardent fans who loathed what was felt as a betrayal of the series.[7] Gresh and Weinberg argued that the subverted religiosity of the series combined with themes of evolution has ensured it will never see a mainstream release in the U.S. "The most controversial theme in the series is its underlying scientific belief in evolution" (Gresh and Weinberg, 2005, p. 168). The same can be said of *Akira* (1988), and evolution remained a key theme within many other Anime over several decades. This represents the main point of contention between science and Judeo-Christian religion, which strikingly in the U.S. still clings to Creationism, and its reinterpretation as Intelligent Design, and why Anime, which seems to take evolution for granted is often viewed as being provocative and forward-thinking. Somewhat ironically, what unites the two is another belief, that in the possibility of Apocalypse, through God's will or not. "Perhaps one of the most striking features of anime is its fascination with the theme of apocalypse… Images of mass destruction suffuse contemporary anime" (Napier, 2005, p. 249). But physical destruction is not the only threat that has been detailed. Other occurrences, such as the emergence of digital

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[7] Following rewrites of the series ending, which took the form of two movie-length features *Evangelion: Death and Rebirth* and *The End of Evangelion*, only served to create further debates both in academic and fan circles. The four movies that Anno is currently creating to reboot the franchise will no doubt only ensure such debates continue with equal vigour and remain irresolvable.

culture has become as much of a disruptive force on traditional society as the threat of nuclear warfare, artificial intelligence and genetic engineering.

Ghost in the Shell (1995) touches on the otherworld that is the Net, but few if any texts dwell on it as much as *Serial Experiments: Lain* (1998). Again the series stands out aesthetically due to its dark and graphic art designs, and also by its music by the now legendary Yoko Kanno. On an almost supernatural plain, it deals with the blurring between the real and the virtual world referred to as the 'Wired' in the series.

> *Lain* thus addresses issues immediate to the rise of cyberspace and of digital media: the potential multiplicity or delocalized identity and the unreliability and unindexicality of memory. But although Lain embodies certain anxieties typical of the digital world, these anxieties are not novel but rather reflect timeless concerns (Prévost, 2008, p. 174).

These are classic traits of cyberpunk, but also link the genre to older concepts and concerns. The series also addresses life-after-death themes and like cyber-punk, it is ultimately about the creation of artificial intelligence and the creation of a world that transcends both the wired and the real. This creation however also entails destruction, as the protagonist Lain experiences. She eventually accepts her place as a deity of the new world, and redefines it into a utopia[8], but loses the physicality of her existence. Despite this "Lain's message is that although we are accustomed to basing our identity on physical tokens and the memories of those who know us, we will be able to exist just fine without those things" (Prévost , 2008, p. 187).

All of these are key texts that represent how "Japanese anime and manga have offered innumerable narratives of humans in transition and postulated brave new concepts with a quietly profound creativity and dazzling art" (Bolton, 2008, p. ix). And there are others that are as well deserving of similar acclaim, such as *Cowboy Bebop* (1998) and the Gundam franchise that have their own array of morals and moods. But there is also a new era of Anime that is further developing the themes, aesthetics and philosophies of these earlier Anime and cyber-punk texts, and endowing them with unique twists, albeit with a backward step or two involved.

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[8] Although using such a word to describe it may unsettle many

The reason for this study's focus on post-millennial era of Anime is due to the gap in academic literature which has concerned itself for the most part with the texts mentioned; *Akira* (1988)*, Ghost in the Shell* (1995)*, Neon Genesis Evangelion* (1995) and *Serial Experiments: Lain* (1998). There are a wealth of titles from the last decade that despite not attaining the fame or notoriety that earlier titles achieved when sci-fi first became a global phenomenon, have nevertheless contributed greatly to the continued importance the medium's genre to the contemplation of the relationship between society's varying cultural values and the progressive scientific aspirations behind technology. New animators and auteurs such as Shukou Murase and Dai Sato have emerged and are largely responsible for sci-fi Anime's psychological techno-spiritual texts. Older auteurs, including Mahiro Maeda and Mamoru Oshii, have also continued producing imaginative, provocative and pensive texts, expanding on ideas from their earlier works.

As previously mentioned this is deeply connected to the reaffirming of conservative moral outlooks, particularly in regard to how "The upswing of fundamentalist religious beliefs casts a grim cloud over the future of technology and the biochemical revolution" (Gresh and Weinberg, 2005, p. 145). This has arguably been a key influence on cyberpunk, Anime and science-fiction in general, leading to both an increase in themes of theism and spirituality in such texts and of idealisation of the past and the afore mentioned reappearance of fantasy.[9] Such outlooks have also seen the decline in what has become the archetypal cyberpunk rebel, the cyberized cowboy hacking the state corporation. This has evolved into the post-cyberpunk where often it is those in positions of advocacy that must contemplate what nature of social order should be employed, often in times of chaos and uncertainty. The secular utopia has ended, and so too has the golden age of technology in science-fiction. The popular stance put forward by post-modern Anime is that it has been ruined by shallow consumerism, creating elitism that has undermined the belief in the democratization of technology, and fuelled the use of egotism and desire for individual fulfilment, representing the redundancy of liberal and secular ideals. Sci-fi Anime now focuses largely on the realms

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[9] Part of this can be seen in texts that are described as being 'steam-punk' or 'retro sci-fi', which is notable for its use of modernised but retro technologies. Two exemplary titles in Anime of this would be *Last Exile* and its 'chivalrous' aerial navies, or the stunningly colourful reinterpretation of *The Count of Monte Christo*, Alexander Dumas' classic novel, into *Gankutsuou,* set in a retro-sci-fi Paris.

of the post-apocalypse, wallowing in worlds devastated by failed technologies. The *Animatrix* (2003), the back-stories to the Matrix films, describing the fall of the humanity due to its inability to reconcile with the artificial life-forms they have created, and *Metropolis* (2001) which captures perfectly what might be called the 'Tower of Babel' concept, which has been referenced several times in Anime as a metaphor for humanity being brought down by its own hand, in punishment for arrogance or overreaching.

The arrival of Biotechnology has prompted a continuation of this trend of threats to the traditional human identity; it has prominently reshaped science-fiction Anime and most likely wider science-fiction. This new ability to alter life at the genetic level has taken an almost magical persona in Anime, and it is here that quite often themes of deity, theism and spiritualism become entwined, forming a pseudo-science that is not always harmonious and is typically implicated in apocalyptic scenarios. This is very apparent in the world of *Gundam Seed* (2003), and the riotous personified vegetation accidentally unleashed in *Origin: Spirits of the Past* (2006).

Despite all these aforementioned texts from the post-2000 era of Anime, it has been surmised that there is still an overall trend in the medium that leans away from science-fiction. Specifically Susan J. Napier, a leading American academic on Anime, while acknowledging the darkening complexity and psychological focus of Anime over the last decade or so, still cites that the other "interesting trend has been the relative absence of apocalyptic series or films (with the exception of *Metropolis*)" (Napier, 2005, p. xv). While the prevalence of more fantasy derived texts must be duly noted, such as the success of *Inuyasha* (2000), *Full Metal Alchemist* (2004) and *Deathnote* (2006), the post-apocalyptic and evolving cyber-punk genres of Anime maintain a steady presence. They too may have allowed fantasy elements into their fold but simply reflects the near supernatural status technology is acquiring in society, and the god-like powers it appears to bestow. It represents the way technology both inspires and threatens people, both empowering and alienating. This statement needs to be reiterated: "Everyone, regardless of his or her position in culture or location on the earth, is aware of a distinct shift in the idea of what is human. Those who fear this change rage against science and technology as the harbingers of what is, from another point of view, the inevitable evolution of humanity" (Lunning, 2008, p ix). This is the heart of what this study is concerned with;

what technologies real, exaggerated and purely imagined are portrayed in Anime and what are the attitudes of these texts to these technologies and where appropriate, how do they correspond to their real-life counterparts and the social and cultural unease surrounding them in the post cyber-punk era of post-millennial Anime. To this end, there are three texts in particular (although others have their part to play too) to which there will be drawn particular attention, due to their encapsulation of the multiple technologies, aesthetics, scenarios and worldviews that I will be discussing. These texts are *Texhnolyze* (2003), *Wolf's Rain* (2004), and *Ergo Proxy* (2006), of which chapter one will be focused on, as well as broader Anime conventions and archetypes to which they pertain. Chapter two is a focus on the apocalyptic aspects of Anime, and how this trope has evolved and the multiple meanings it embodies, particularly its links with evolution. Chapter three is an analysis of cyberpunk Anime specifically, as it is this genre that deals most explicitly with cybernetic entities which is this chapter's core concern: cyberization and artificial intelligence. It establishes a continuum of various concepts crucial to cyberpunk and how Anime, particularly the evolving franchise of *Ghost in the Shell*, enacts these. Chapter four explores the newest technology that Anime portrays. It also has its roots in cyberpunk, but has become a technology with an even broader range of post-human potentials. Another continuum of themes that are present in multiple post-millennial sci-fi Anime will be explored, and will include other texts with greater specificity to particular aspects, alongside the more encompassing key texts. This chapter also explores how biotechnology especially is associated with the amalgamation occurring between science and religion that the key texts in particular depict.

Chapter I: Aesthetics and Archetypes

Hopefully the impression has been given that there is a wealth of titles, even within a subgenre and a specific time period, from which the key texts pertaining to this topic are drawn from. However all of these are related via archetypal themes, symbols and aesthetics to the predecessors of the wider sci-fi genre and Anime medium.[10] The post-millennial era of Anime draws on many classic sci-fi themes, particularly from the decade immediately preceding them, but they have been developed, altered and subverted to create new structures of ideology and imagery. What was necessary for this study, and indeed what marks out great narratives from within a wider a genre and era, is the ability to encompass multiple themes, aesthetics and ideals to create in-depth, fleshed out words both visually and philosophically. Deriving different aspects from such texts would help establish commonalities that could create a core group of visual motifs and images, as well as collective attitudes and moods. This would avoid the immersive fatigue that would result from the analysis of the near inexhaustible amount of texts in circulation. *Texhnolyze* (2003), *Wolf's Rain* (2004) and *Ergo Proxy* (2006)were selected to this end, as they possess fairly consistent visions regarding the three concepts with which sci-fi Anime has largely been concerned with in since the 1990s and continues to be now; the aforementioned apocalypse, cyberization and biotechnology. A parallel analysis of these texts, aided by additional more specific supplemental texts, allows the complexity of these many different themes of technological progress and regression to be uncovered in light of changing social attitudes. This chapter details the aesthetics and archetypes that exist within sci-fi Anime and how these are being developed in later texts.

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[10] As mentioned there are texts that deal with variations on bio-technology, regarding augmented and even entirely genetically engineered people and societies. There are those dealing with the continued encroachment of the machine upon the human body; both the more traditional mechanical parts such as arms and legs and organs; and the advent of the elusive kind, microscopic nano-machines and the expansive virtual worlds connected to the brain and sensory perceptions. There are also those delving into the themes of apocalypse, both the literal world-destroying spectacle and the more symbolic and metaphysical process of death and rebirth, the cyclic metaphors of change, which are often linked closely with cyberization and bio-technology.

1.1 Texhnolyze

'Because I don't know anything, will I destroy everything?' - Ichise

Texhnolyze, 2003, Hiroshi Hamasaki, Madhouse, 550mins

Texhnolyze (2003) is perhaps the most straightforward case, at least on the surface level. It is also the shortest text and like all three that have been selected it was first released as a television series. Its title is a somewhat arbitrarily artistic rendering of the word 'technolize', and uses robotic limb-replacement as an entry point into a regressed post-apocalyptic world fraught with social tensions between ideologically opposed individuals, organisations and communities, some of which are manipulators, some of which are pawns. It is also the text with the most ancestry behind it. The series reunites writer Chiaki J. Konaka, character designer Yoshitoshi ABe, and producer Yasuyuki Ueda, who all worked together on *Serial Experiments: Lain* (1998), and in many ways *Texhnolyze* (2003) can be seen as the spiritual successor to *Lain*. Both possess a very dark and foreboding atmosphere, and often eerily quiet city-scapes with equally melancholy and oft-silent and withdrawn protagonists. Though, in what will also become a trend, *Texhnolyze* (2003) is in many ways a regression from the unified view of the world that texts such as *Lain* pertained to. One way to define this contrast is to immediately compare its two protagonists. While Lain is referred to as 'software' in her universe, Ichise of *Texhnolyze* (2003) is clearly hardware, psychologically all brawn and rage and a pit-fighter by trade, his body subsequently 'installed' with bionic limbs, also hardware. Concurrently they can also be viewed as symbols for enlightenment and ignorance respectively, or as creator and destroyer; while Lain creates a new world for humanity,

Ichise must face down his destiny to destroy: 'because I don't know anything, will I destroy everything?' Ichise's berserker mentality clearly denotes him as being resilient, but inhumanely so; an animal and a pawn within a complex war of ideals which he fails to comprehend.

The text, as are all three texts, is post-apocalyptic, but unlike earlier Anime which would showcase the event through displays of brightly evident and immediate destruction, *Texhnolyze* (2003) treats such an event instead as a slow decline and decay of humanity; sterility is the great threat here, not incendiary weaponry. There is a panic resulting in the creation of the subterranean city of Lukuss, the story's setting, but it portrayed as a quiet and callous holocaust. It is also an event that is lacking in audio/visual detail, described only through dialogue and montage, a subversively flippant attitude to the previously spectacular event that has been the repeated destruction of civilization. Contrasting the series to its predecessors thus gives darker contours to its abstractness, revealing a quieter lonelier descent into extinction. The conjoined twin of the sci-fi Anime apocalypse; evolution, is treated with the same kind of abstractness. What this ultimately entails is an ongoing struggle between the two social-problems that occur within its universe and others, that of Chaos and Inertia. Whilst the city of Lukuss is unable to resolve its contradictory parties' bloody conflicts with each other and descends into butchery and anarchy, the ghostly denizens of the pastel world above can barely even rouse themselves to speak or think and await the dissipation of their dream-world with complete indifference. The co-existence of these themes alongside very prominent aspects of theism and spirituality are another post-modern trend.

Though the use of religion alongside science-fiction is hardly new in of itself, its presence at the forefront in sci-fi Anime at the behest of the decline of the oft-imagined cyberized worlds is indicative of a change in attitude, especially in that which riles against technology. This is recognizable in several different ways in *Texhnolyze* (2003), but most immediately in the group called the Salvation Union. Though the group is secular, its core beliefs are around the purity of the body conveyed primarily through its mantra: 'Soul! Body! Truth! Salvation! Vengeance!', and its spiritual revulsion for texhnolyzation. The series also makes use of post-modern spiritual concepts such as urban-shamanism, and the attempt of deification of the master-craftsman, the scientist

who pioneers technological artefacts for the progression of society. Sci-fi society has of late not been as welcoming of such ingenuities. Ichise perhaps, captures most emotively this change in attitude when he attempts to literally tear off his new mechanized arm. The concept of linking artificial limbs to severed nerves and musculature of amputees is already being put to practical use, its benefactors being idyllically called "Tomorrow's People" (Fischman, January 2010, p.39) by National Geographic. For *Texhnolyze*, such pleasant futurism is undermined by acknowledging the class-struggle that comes with such technology. It would not be an unlikely hypothesis that such issues will be become apparent when bionics becomes more widely available in the real world. Both cyberization and GE are followed through to extremes, which only leads to the continued 'abstractness' which seems to be the series' key theme. It is not through violent destruction that the world ends; *Texhnolyze* (2003) surmises 'that' is simply a symptom. The demise of humanity is due to the loss of its contours, its inability to recognise itself or find a new shape that suits it, and thus its surrender to destruction and oblivion. It is a strong metaphor for a very tragedian narrative.

1.2 Wolf's Rain

The Dark Prince and the Flower Maiden

Wolf's Rain, 2004, Tensai Okamura, Bones, 750mins

I tell you now the words of Red Moon. From the Great Spirit was born the Wolf, and Man became its messenger. The beast lives his life in silence, abiding where the blood of the gods is bestowed upon him. The White flower after winning the favour of the Lord of the Night will share her secret. Preordained and eternal in countenance, her form is of a lily white, supple maiden. She distils and condenses all of time until it becomes a precious frozen mass, only then will appear, the wretched beast.

- The Book of the Moon, *Wolf's Rain* (2004)

Wolf's Rain (2004) is a mythos in many senses. It is a sci-fi, gothic fairy tale, fusing aspects of literary cyberpunk with techno-mythology to create a unique telling of what would otherwise be simply another post-cyberpunk world in decline. Of the three primary texts being cited, and within modern sci-fi Anime as a whole; *Wolf's Rain* (2004) is an acute example of how fantasy is returning to prominence and even bleeding into the often more grounded and reality-based 'science'-fiction to create a surreal and mesmerising hybrid. It is a world where shape-shifting wolves, castles and palaces with cursed princesses and dark princes co-exist with futuristic air-ships, genetically-engineered life-forms and advanced computers. But like many post-apocalyptic narrative worlds of the last twenty years, a cataclysm has occurred due to a scientific experiment going awry.

Paradise is the central theme of the series and it is fallacious one. It is the driving force behind both protagonists and antagonists, yet in an age of cynicism, reflecting no doubt much of post-modern secular civilization, it is a concept also treated with much derision. Kiba, a shape-shifting wolf struggles to lead a disparate pack who in turn struggles to comprehend a person so fanatical about Paradise that he 'can't imagine living without believing in it.' And yet Paradise possesses a dual role in the series as both an elusive utopian ideal and a curse, a sickness of which the nobility is afflicted. The notion of Paradise being an affliction of the affluent could well be seen as an attempt at satire, but this plot-point in of itself also has a double-role within the story as well. Paradise specifically affects the Darcia clan of the nobility, as it was Darcia I who attempted to open the gates to Paradise with his alchemy, alchemy being a byword in *Wolf's Rain* (2004) for bio-technology. Thus the curse has implications of imposition for both the nobility's avarice and involvement in genetic engineering. This obscure nature of Paradise however is hinged on the text's key revelation: Paradise is subjective. The

shamanic journey of *Wolf's Rain* (2004) travels through various interpretations of Paradise, hinting at religious experience, narcotics and virtual reality as bases for its structure, each of which is eventually rejected or disassembled by an opposing party, such as Lord Darcia III attempting to deny the wolves their own Paradise. The onset of this truth does not deter those in search, but does kill them off. The end of the series takes place shortly after where the story first starts, with the image of Kiba collapsing in the snow with a flower, capturing the true nature of this pathos:

> They say there's no such place as paradise. Even if you search to the ends of the earth, there's nothing there. No matter how far you walk, it's always the same road, it just goes on and on. But in spite of that, why am I so driven to find it.

Why indeed? This is not however a belittling of religious faith alone, nor is it a 'Tower of Babel' analogy either. The implications for *Wolf's Rain* (2004)'s story is that the downfall of world occurs repetitively because the Nobles seek a Paradise meant only for the individual, as occurs with Darcia I and III and Jaguara. Thus the apocalypse is viewed not as a wrath of god scenario, but something more sociologically familiar; a class struggle.

As opposed to *Texhnolyze* (2003) whose struggles are heavily infused with various political ideals, *Wolf's Rain* (2004) deals more insistently on control of wealth and resources, exemplified by the nobles' monopolisation of advanced technology and their many palaces. In this power-play however it is interesting to note the diminutive status of humanity itself. Humans are a pitiful lot in the series, kept firmly under the heel of the nobles, and yet a species that falls immediately into total anarchy when the iron-fisted guiding hand of the Nobles is removed, as occurs after the death of Jaguara, the last noble in control of a human population.[11] Humanity is aware that Paradise is not for them, and is surprisingly accepting of their exclusion. They remain locked in mediocrity, fully separated from the supernatural wolves and Nobles, as one human puts it: 'I think

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[11] The one exception to this in the series is an odd one. The wolves in their journey encounter a nomadic tribe, who remarkably resemble Sioux Indians but are named the Hmong tribe, Hmong being a South East Asian ethnic group. Kiba also encounters an illusory Paradise in this territory which resembles pre-colonial America, complete with buffalo. This may be commentary on the glorification of Native Americans and their former wilderness, a setting which provides a convenient landscape image for the intangible Paradise.

the vision of the world has split somehow. There's one we humans can see, and one we must've lost sight of at some point.'[12] Still, as mentioned earlier *Texhnolyze* (2003) and as will also become apparent in *Ergo Proxy* (2006), this racism pertains to the new trend has become a distinct aspect of post-cyberpunk Anime: the great enemy is diminished; alien or mutant species, vengeful robot armies and genocidal AI, all pale in the face of 'human' enmity, which *Wolf's Rain* (2004) represents through conflict between markedly different 'species' of humanoids.

The regression of technology is another theme of the post-cyberpunk text which this series adheres to along with the usual urban decay and barren wilderness it also features. A lone robot provides one of the few brief examples of 'mecha' in this text, but is clearly part of a since-lost age that is never detailed. The writers instead have allowed the more contentious bio-technology the place of pre-eminence. This is embodied through Cheza, a product of Darcia I's alchemy, 'the flower-maiden', but as she is supposedly the key to opening Paradise, her role is shrouded in myth and ambiguity with all the allure of a Siren, because for all the story suggests, she is simply leading her pursuers down illusory roads to a destination that is never reached, save for its interpretation as the rebirth of the world. Despite its perceived sense of inevitability of extinction, evolution and rebirth remain strongly present at the series conclusion, implying in a fittingly fairy-tale and karmic fashion that its inhabitants shall 'meet again, next time'. One might interpret this as an idealistic compromise between the ethereal unattainable Paradise and harsh reality of the miserable apocalypse, or merely a more subjective view of the spiritual and technological pathways that are amalgamated therein.

1.3 Ergo Proxy

Ergo Proxy (2006) is easily the most complex of the three. Originally another television series the text has a near exhausting number of layers. The initial surfaces consist of the social and scientific issues of traditional cyberpunk aesthetics and mandates, which peel away to deeper artistic and philosophical themes and associated iconography. All of this revolves around a greater schizophrenic narrative regarding the story's own unique

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[12] Or as another puts it: 'that's just the kind of stupid creatures we are. We don't have righteous dignity like you wolves, we gotta have something to hold onto, something we can resent, and hate, and envy, and something we can love.' Not that such supposedly 'petty' emotion is limited to humanity.

queries and portrayals regarding both the human condition and the nature of deity. It is easier to consider *Ergo Proxy* (2006) from these three different levels or layers due to the complexity of such a text.

At its surface is the familiar cyber-punk world, one not so dissimilar in appearance to a twenty-first century metropolis. Computers and other virtual technologies have notably advanced, but what is most apparent is the normalised presence of AI personnel, referred to in the series as 'autoreivs' who are bonded to a 'fellow citizen' to serve as either a personal assistant known as an entourage and/or companion. The autoreivs also have what is called a turing application, software which, when engaged allows the autoreiv to communicate in a human manner (the application is a direct reference to a test contrived by the computer scientist Alan Turing to determine the intelligence of a machine, intelligence which for the androids of this text is now taken for granted). The city itself is another example of the surveillance society, its population permanently monitored and controlled, ironically with the aid of their own autoreivs, who are all networked to the various bureaus who manage the city and can report their masters' every move and vocalised thought. The twin principles of consumerism and obedience to the state are what drives and maintains this society, the 'boring paradise' as one protagonist Re-l puts it.[13] Like many sci-fi dystopias, Romdo's fellow citizens are ruled by the elite, and both are assisted in their roles by the autoreivs, but from the outside world other people have arrived, the immigrants. Most are denied citizenship and many inhabit Romdo illegally, others are allowed to work with the hopes they may eventually gain citizenship in return for their labour.

But like many cyberpunk metropoli the city harbours what are now classic dark secrets. The first is an event that has been documented in sci-fi for many decades, that of the machine acquiring a soul. *Ergo Proxy* (2006)poetically relates this to the philosopher Descartes' theory 'Cogito Ergo, Sum', most often translated as 'I think, therefore I am', in that the autoreivs spontaneous acquisition of a soul is referred to as the Cogito virus, an infection. This is one of the key themes of the series, the proof or knowledge of one's own existence, and it is tied closely to another key theme, Raison D'être, a term that has

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[13] Public announcements in malls and other commercial districts proudly broadcast the behaviour of consumerism: 'the time is now to consume, why skimp when you deserve more'.

enjoyed tenure in several Anime television series of the last several years. Often translated as 'reason for being' or 'meaning of existence' it is used to describe a character's purpose and actions whether human or autoreiv. The existence of a soul is not necessary for the possession of a raison d'être, and the acquisition of a soul often does not change a character's raison d'être. This concept is at the core of the portrayal of human-AI relationships of the text. The Cogito virus and raison d'être steep the series in a very techno-philosophical and psycho-analytical environment to rival the likes of *Neon Genesis Evangelion* (1995) and Mamoru Oshii's *Ghost in the Shell* (1995), and renders supposed social concepts and woes from sci-fi and other fiction, such as class struggle, consumerism and immigration to the peripheral. The series makes extensive use of allusions to many philosophers, which seems a largely symbolic gesture, as many minor characters or autoreivs in the series are simply named after them, such as Deleuze, Guattari and Kristeva. Romdo itself is possibly referential to another philosopher. The domed city in its socio-political structure bears a very striking resemblance to Plato's concept of the Ideal Guardian City and is often referred to as a utopia by the Collective[14], thus they are the Philosopher Kings of Romdo, as Plato describes in his *Republic*. That *Ergo Proxy* (2006) is both a post-apocalyptic text and makes extensive use and allusion to Western philosophy serves as an inspired metaphor for the fall of Western civilisation.[15] The text expects much knowledge or research on the part of its audience in order to pick up on its myriad of literary references as well, which ranges from William Shakespeare to Walt Disney to Greek mythology.[16]

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[14] The sentient sculptures known as the Collective, who rule Romdo from behind the scenes, are also named after the theorists Derrida, Husserl, Lacan and Berkeley.

[15] The aforementioned statues are also copies of Michelangelo's 'Day and Night' and 'Twilight and Dawn' sculptures which also speak of the wealth of art and literature the series draws on, and director Shukou Murase trend of using sculpture in his Anime, he also used the 'Pieta' in his previous series *Witch Hunter Robin*.

[16] The chief of Romdo's Health and Welfare Bureau is named after the mythical Greek inventor Daedalus, who built the Labyrinth for King Minos; Romdo is referred to several times as a Labyrinth. *Ergo Proxy*'s Daedalus however, as a sci-fi would dictate, is a master scientist. Much like *Wolf's Rain*'s Darcia I he is also a practitioner of bio-technology and like Darcia III is of questionable sanity that furthers degrades to that of a sociopath. This leads him to create a clone that bears the visage of Re-l for whom he bore an unrequited love. She is seen multiple times carrying a ball of red string, this can be interpreted two ways but one is as the ball of string given to Theseus to escape the Labyrinth. The clone of Re-l also sports a pair of wings, with which she also abandons Daedalus and eventually flies toward the sun and perishes, in reference to Daedalus's son Icarus.

The bio-technology aspect is another theme of interest of *Ergo Proxy* (2006) which relates it to concepts of dystopia both old and new. Romdo's population is engineered both in its social structure and its genetics. Humans are created through an artificial construct called the womb-sys, the 'clockwork wombs'; sexual reproduction is implied to no longer be a human function. This has become a trend in sci-fi Anime over the last decade, a portrayed link between the altering of human genetic structure and infertility, an effective motif that draws on innate fears of one of the most contentious technologies to date.
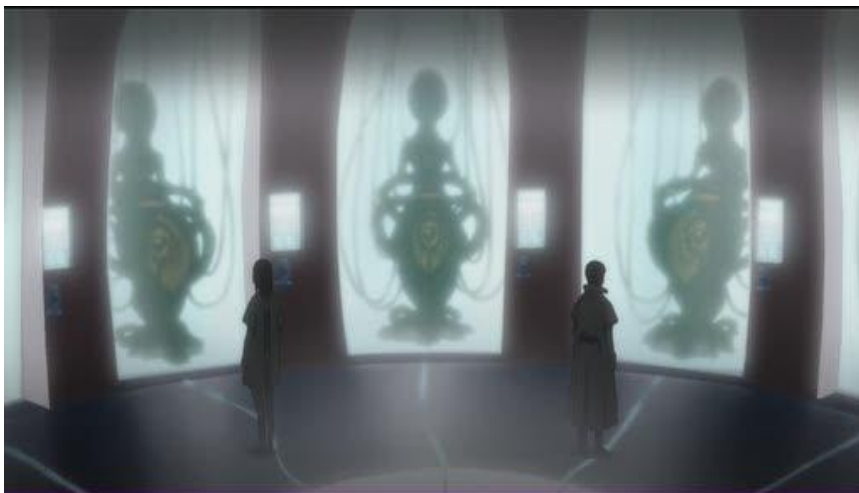
The Womb-sys:

'Only by our constant intervention does the human race continue.' - Daedalus

Ergo Proxy, 2006, Shukou Murase, Manglobe, 575mins

These represent the vast wealth of wider concepts and sources the series explores, but at its heart are far more innate emotional and spiritual themes and philosophies unique to itself. These mark *Ergo Proxy* (2006) as one of the most theologically and esoterically engaging Anime texts of the last two decades. It is ultimately the story of Ergo Proxy, who along with the other Proxies has been released in order to create new 'cradles' for humanity so that the seed of human civilization might be replanted in the desolate post-apocalyptic world. This is Romdo's other dark secret, the elusive bio-engineered Frankenstein stalking the city. But although 'it is in no way a person', its 'monstrous' presence belies its divine status, although the link between gods and monsters is a theme which will be explored later. The story's focus is about the fragmentary personalities, both physical and psychological, of *Ergo Proxy* (2006), an

occurrence due primarily to his dissatisfaction with his creation, Romdo. Effectively, he is a schizophrenic god. Bearing some similarity to autoreivs who attempt a journey to find themselves, his is a journey of 'anamneses' as one his inner voices describe, to reverse the schisms of his psyche. The schism or crisis of identity is a heavily ingrained aspect of the series, the question 'What am I?' 'What the hell are you?' becomes a repetitive tattoo throughout the series.[17]

The connection between truth and misery is another repeated theme. The implication is that ignorance, amnesia or even dementia are preferable to knowledge and truth, but that curiosity will drive a person to seek it out anyway, a fact Re-l muses on, 'my curiosity would not allow me to be happy.' At the heart of this pessimistic duality is yet another esoteric theme, the dissatisfaction with omnipotence, or alternatively put; the limits of omnipotence[18]. The Proxies are flawed, surrogate gods, rejected by their own creations who reflect the same flaws of those who designed the Proxies, so it is a 'divine' despair that has been passed down by those humans who now reside in orbit who escaped the apocalypse via space-craft.[19] The true betrayal and irony for the Proxies is that they are designed to be killed off after the fulfilment of their role, triggered by the Pulse of the Awakening, of which it is implied is meant to be carried out by Ergo Proxy, the 'Agent of Death'. In Western theology at least, the presence of a flawed god is a bold statement in of itself, but a mutual dissatisfaction between deity and humanity, and the intent of each to exploit and destroy the other is a concept that speaks multitudes on the attitudes of the post modern-era of science-fiction. That the Proxies are a human construct, a biological artificial intelligence, places technological concerns, especially bio-technology at the forefront of concern. What is being allegorically detailed in these texts is a human identity crisis, thus delirium is a given.

The Proxy represents the finished product so to speak, of technology and divinity, and has been given its own character and a voice (in fact several of each). It is by no means a harmonious existence, but again this is reflective of the real-world tensions

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[17] Such explorations of the psyche are not just corporeal, and much introspection and schizophrenic conversation take place in Ergo Proxy's head with other aspects of himself, such as the immigrant persona of Vincent Law. If this were not bewildering enough, at multiple points he must even confront other entities pretending to be him.
[18] Which the series does not at all see as an oxymoron.
[19] They are never seen and referred to only as the 'Creator'.

technologically advanced societies are experiencing. This is about the human relationship with the non-human, be it mechanical, digital, biological, or divine and of course various amalgamations. They are relationships which for some are getting too close for comfort. 'Cold-feet' might sound cliché but it seems an apt analogy, hence the themes of identity crises. Science-fiction has always pushed the boundaries of these relationships in its imaginings and this is simply the next stage of these narratives. From one perspective it may seem "we are killing ourselves and our past through technology's sheer drive forward, but in another way (as we shall see), successful negotiation of relationships with technology can potentially open powerful revenues of freedom." (Ruh, 2004, p. 130) To give *Ergo Proxy* (2006) some contrast to its predecessors, consider this little anecdote from *Neon Genesis Evangelion* (1995). In the series, a member of the organisation SEELE, who are also attempting a rebirth of mankind, declares: 'Man must not create Gods.' In *Ergo Proxy* (2006), such gods have been created; three hundred of them in fact, and have spread out across the earth, and one in particular has its own story to tell.

1.4 Aesthetics, Motif and Symbolism

Many of these multitudes of themes are carried at least partially by visual motifs and designs. The aesthetics of cyberpunk and science-fiction, including titles within Anime are often filled with both literal and metaphorical symbols. Paramount amongst these are the symbols of destruction and surveillance that are part of the concept of dystopia, the umbrella of sci-fi that covers all the negative connotations of technological future-scapes. In two quotes, Brian Ruh catches the essence of these two quite different aspects within Oshii's *Ghost in the Shell* (1995):

> Toward the climax of 'Ghost in the Shell', the use of sophisticated weaponry that destroys both the images of the skeletal fish and the tree in the museum is symbolic of a sense of loss created by the encroachment of technology. If the tank had more ammunition, it would have destroyed the "hominis" label on the tree as well, alluding to the fact that we modern humans are more than capable of orchestrating our own destruction (Ruh, 2004, p. 130).

> [I]n 'Ghost in the Shell', the main character is a cyborg that works for a special section of the government. Although she is theoretically free to do as she pleases, the government owns her body and the memories contained

within. Through this character, Oshii shows that as technology becomes a larger part of our everyday lives, it can inscribe us within new circles of control (Ruh, 2004, p. 10).

Ashes to Ashes, Dust to Dust: The ruin of civilization

Wolf's Rain, 2004, Tensai Okamura, Bones, 750mins

These two aspects each refer to a wider theme that appears in science-fiction. The first aspect is obviously part of the apocalyptic nuclear warfare archetype, which views technology as a violently destructive force resulting in the decimation of the planet, both human civilization and the natural world. The second refers to the view of technology as a drive toward totalitarianism and social control, specifically through the medium of surveillance. In cyberpunk and sci-fi terminology this is referred to as being an 'Orwellian' regime, in reference to George Orwell, the author of one of the most famous pieces of literature regarding the concept of the surveillance society, *Nineteen Eighty-Four* (1949). As was earlier divulged this form of dystopia is reactionary, a subversion of the utopia people dreamed technology would bring them. As such the surveillance society is always based around lofty ideals, but these have been followed through to a state of totalitarianism. Perhaps the most interesting interaction between these two themes, the modern apocalypse and the surveillance society is that aesthetically they are incredibly different, often literally as black and white. They are differences that Anime has acknowledged as well, and despite it, both themes in this medium are highly capable

participants in conjuring unsettling or horrifically nightmarish societies and ironically are usually mutually inclusive as Ruh makes evident in his description of *Ghost in the Shell* (1995). The two scenarios can also become a catch-22, as one can lead to the other; environmental destruction can lead humanity to resort to totalitarianism, or vice versa. To understand the definitions, contrasts and thematic links between these concepts, both require some explanation.

The post-apocalyptic is defined by the spectacular destruction taking place within the urban sprawl, representing the squalor and decline of civilisation, as conflict in various forms, from gang wars to real wars to full blown nuclear war take place. The image of the nuclear explosion seen in Katsuhiro Otomo's *Akira* (1988) is one of the most iconic examples of this, but it is one amongst the masses (as earlier stated). The nuclear explosion or mushroom cloud has in more recent years become an analogy for other modes of apocalypse linked closely with rebirth and evolution. In any case, the spectacle is only the initial flash, the post-apocalyptic world is precisely that; what comes after the apocalypse, and it is defined by its landscape. What's first apparent is the expansiveness of it. The impression most often given by the artwork of such landscapes is of great expanses, deserts being one of the most common settings, with singular colour schemes conveying a sense of endlessness and nothingness. They are lonely places, where the few communities remaining are isolated and fragile, dependent on whatever scarce resources are left over, water usually being the main concern. Paradoxically the 'waste-land' may indeed be full of life such as forests and insects but they stand in direct opposition to humanity's previous lifestyle. Studios Ghibli and Gonzo have both produced texts that relate the apocalypse in this way, in *Nausicaa of the Valley of the Wind* (1984) and *Origin: Spirits of the Past* (2006) respectively. Both of these texts represent a different view of the nuclear holocaust, almost subverting it entirely as that of the planet attempting to heal itself. In the case of *Origin* it is also indicative of the nuclear aspect of apocalyptic themes being replaced in favour of the new avant-garde technology of genetic engineering. *Wolf's Rain* (2004) bears thematic similarity to this, in that its holocaust occurs as the result of genetic experimentation. But *Wolf's Rain* (2004) also links this to religious experience in another double-entendre, as the experiment is an attempt to open the gates to Paradise. *Ergo Proxy* (2006) actually goes so far as to

separate the nuclear warfare aspect from that of apocalypse. In its case the use of nuclear weapons is an aside to main accident that has occurred, scouring the earth of life. They represent an almost petty pretentiousness, as if the concept of attacking an enemy with nukes was somehow out-dated or juvenile.

Named and Numbered:

Re-l Mayer
RE-L124C41+

The dystopian era of information control.

Ergo Proxy, 2006, Shukou Murase, Manglobe, 575mins

The surveillance society is equally unsettling, but conveys this sense unfeeling through its claustrophobic, labyrinthine settings. This form of dystopia is self-contained and inescapable. The concept of 'Big Brother'; that of perpetual surveillance of a populace virtually invented by Orwell, ensures that all unnecessary and unacceptable behaviour are weeded out and corrected. Thus they become the cloistered, self-contained environments where everything 'needed' is provided for. There is a far more subtle malice present in this version of civilization, which is represented by ignorance of the populace and the atmosphere of monotony and anaesthesia; the boring anti-septic utopia. One of the ways this is portrayed is again through the use of a restricted colour palette. In opposition to the apocalyptic dystopia; the totalitarian is often white-washed, glossy and reflective. Anime in this regard differs quite differently to its Western sci-fi counterpart. Western surveillance societies are more often pictured as brutalising and dehumanising systems of control designed to keep the population in a barely acknowledged state of fear and loyalty to the state, as seen in *Nineteen Eighty-Four* (1949) and Alan Moore's *V for Vendetta* (1982). These themes do not crop up anywhere near as much in Anime, and in a society as rigidly structured as Japan, with very particular hierarchies and etiquette, this is

hardly a surprise. Sci-fi Anime as previously mentioned has more in common with the 'boring utopia' aspect of dystopia. Information control is large aspect of this, and especially in Anime of recent years has been about keeping the outside world secret and cut off from the inner-sanctums of civilization. Surveillance becomes a moot point if the populace is ignorantly content.[20]

Ergo Proxy (2006) and the city of Romdo are an excellent example, where the populace is kept ignorant of the outside world, and may only look upon a false sky above them. Information control thus centres around who is allowed access to knowledge and truth, to put it more simply perhaps, it is not about who is being watched, but who is watching. The journey then becomes the ultimate act of rebellion. One epitome of this mode of dystopia occurs in Wolf's Rain (2004), in the Lost City that Lady Jaguara controls. In this place the people move around so little that entire city has no maps or road-signs, as people never travel far enough to need them, and are unaware that there is a keep at the centre of their city where the Nobles reside. That the populace seems blissfully content with such an arrangement makes an outsider's glimpse all the more the disturbing, which is often the commentary that is made on Orwellian dictatorships. This has more to do with classic cyberpunk, in that it relates to the themes of isolation and lack of connection, both to one's self and to other people. Memory is of particular importance to this, and how technology might one day be able to alter it. This is a pivotal theme of the Ghost in the Shell franchise in all its adaptations, whereby artificial brains have become a normality, but so has cyber-brain hacking, the ability to infiltrate an artificial brain and steal, alter or delete data, data being in this case; memory. The introduction of technology in this case has led to a vulnerability of the human psyche. Ergo Proxy's journey to reclaim the memories he once forcefully removed in order to escape the despair of being a god is another more esoteric example. This can lead to some very interesting head-trips rich in symbolism and metaphor.

One overall theme hasn't changed, and that is the perceived threat of technology as a whole. The cold-war fears of nuclear warfare are on the decline, but the suspicion that genetic engineering may spawn some sort of life-form beyond our control are alive

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[20] This can be seen to at least some degree in all three key texts as well as others such as RahXephon, where Tokyo is kept hidden from the rest of world behind a spherical shield and even experiences a different flow of time.

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and well in Anime today, and the same can be said of artificial intelligence, a concept that is merging with bio-technology. Thus artificial sentience, mechanical or biological shares in these post-modern narratives, the destructive tendencies of a hydrogen bomb. This is a Pandora's Box mentality which has stuck with dystopian sci-fi since its inception. The inhuman has always been presented as an object of repulsion, and this remains true, but focus has shifted now to the abuse these entities endure. In the post-modern age (and earlier), humanity behaves as monstrously toward that which it despises, and in turn creates monsters. The fundamentalist mentality of 'us' and 'them' has been taken, examined and subverted into a mirror, making humanity the bigot, lacking sympathy and understanding. This makes the kind of epic destruction in these texts seem all the more tragic and unsettling.
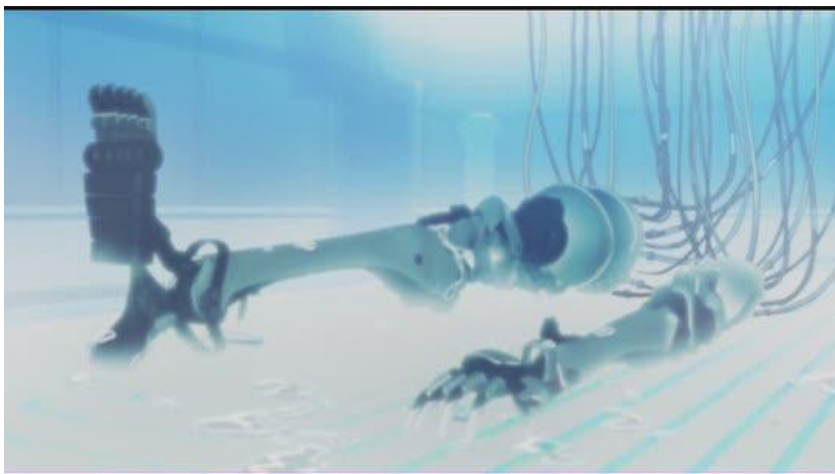
Enhancing the texhnolyzed world:

Digital animation and the image of technology.

Texhnolyze, 2003, Hiroshi Hamasaki, Madhouse, 550mins

With these two simultaneously occurring states, the Orwellian surveillance and post-apocalyptic society, a 'Berlin Wall' or 'Iron Curtain' or however one is to describe it exists between them. The stories in all three texts become about the desperate escape from the Orwellian cyberpunk city, and out into the desolate post-apocalyptic wastes of the outside.[21] This is visually seen in what can be termed humanity's 'cradles' in the texts, the encased Domes protecting humanity from the poisonous world outside. Both Free City and Romdo in *Wolf's Rain* (2004) and *Ergo Proxy* (2006) respectively are even

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[21] And interestingly, an inevitable return to the city as it too is reduced to rubble is usually entailed as well.

referred to as Domes, whilst the subterranean city of Lukuss in *Texhnolyze* (2003) simply inverts the surrounding space, it too becoming another Dome. These are at first an act of necessity. It is implied that all three were created to preserve the remnants of humanity from the destruction outside, but they have become as toxic as the outside in a different sense, in the way lay they limit people. And yet paradoxically, the perilous journey of the protagonists that results in the breaking of these walls often ensures the destruction of these bastions. Ichise and Kiba both die alone, the last living people of their respective worlds, gazing longingly at a flower, consumed by the doom and loneliness they had strived so hard to escape from. Even Ergo Proxy witnesses many Domes that have passed into ruin, due to the despair and insanity of their Proxies, and in turn allows the destruction of his own Dome. In 'freeing' his creation he causes an incalculable loss of life. This is a consistent philosophical attitude entrenched in these pessimistic dystopias, as well as a visual motif, the idea that there are no right answers. All they seem to achieve is uniting two forms of isolation; that of the literal isolation in the outside world, and the more psychological isolation, the emotional retardation and lack of connection that persists within the cyberpunk world. The rejection of both worlds, told through the visual destructions of each makes one message quite clear: The human race is missing something.

On a distinctly different note, there is another aspect occurring in the illuminating of these visual and often dark worlds that is worthy of inclusion. Fittingly, it is another technology, one directly related to the production of the medium of animation. The traditional Cel animation used by Anime is becoming and more augmented and enhanced by the use of computer generated imagery (CGI). This has traditionally been to give a more three-dimensional feel to the image, and sharper definitions in colour and detail. This serves to amp up sequences of excitement or poignancy, just as it is in live-action cinema and television. Mostly it appears to exist to give a more realistic feel to otherwise fantastical objects and machines, so it sees much use in Anime containing mecha[22] and space/airships such as the *Gundam SEED* (2002) or even more notably in Mahiro Maeda's uniquely retro sci-fi series *Gankutsuou: the Count of Monte Christo* (2004) and

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[22] "In the world of Anime, mecha refers to gigantic humanoid robots and human-piloted robotic vehicles" (Gresh and Weinberg, 2005, p. 34).

Last Exile (2003). Some recent Anime titles in the last few years have even opted to use CGI as the primary form of animation, whilst still maintaining the 'feel' of traditional Cel animation. *Appleseed* (2004), based on the manga by Shirow Masamune is the most recognized title of this kind of Anime.

Starting a tradition it seems, it was another adaptation of a manga by Masamune that became famous for its combination of digital and Cel animation, Oshii's *Ghost in the Shell* (1995), particularly the scene detailing the construction of a full cyber-body, the artificial bodies used by cyborgs, whose brains are even artificial. It is a scene that is recreated with entirely digital animation in Oshii's sequel to this film; *Ghost in the Shell 2: Innocence* (2004), stunningly detailing this time the creation of a gynoid, an android designed for sexual companionship. Oshii's use of CGI has only become more apparent with each following film.[23]. Mostly digital technology in Anime is used in an ostentatious and complementary manner, giving greater characterization of both the beauty and squalor of the worlds they are depicting. That digital sequences of animation are most often used to depict the effect of technology on people is telling. Whether utopian, dystopian or both, such portrayals become more eye-catching when placed in the digital light. Ichise's texhnolyzation process is another key example of this, very much in keeping with *Ghost in the Shell* (1995). *Ergo Proxy* (2006) is interesting as it uses it more in the depiction of its settings than its objects, preferring to construct with full 3D effects, the lengthy corridors of the labyrinthine Romdo, and the barely illuminated ashen grey wastes of the world outside. In any case sci-fi continues to be the realm in which CGI has made its home, and become a distinct aspect of the aesthetics of worlds that are somehow both far removed, and very close to home.

1.5 Codes and Conventions, Persistent Themes and Archetypes

Any genre of narrative, no matter what it is, over time and with prolonged popularity will begin to develop its own codes and convention, accepted themes and even set progressions of narrative and character types. On the one hand these can help to give

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[23] His latest *The Sky Crawlers* showcases the high level of technical craft being developed in this area of animation, whilst still remaining distinctly 'Anime'. Even Oshii however has been influenced by the popularity of retro-technology which has become so popular in the new millennium. The more obviously digital sequences are most often those detailing the aerial dog-fights in the film, between the remarkably World War II-looking fighter planes.

definition to a genre, to make it recognisable. On the other hand if the same character types, plot points, settings and styles of animation and other themes and aesthetics are overused they quickly become cliché. Thus 'good' art can be defined by its unique take on established themes and conventions, because "Let's not kid ourselves: art is defined by its rules" (Patrick Drazen, 2004, p.16). Just as such definitions within a genre are being regularly updated and altered, so too does there exist the more generic and more blatantly referential texts that borrow heavily and noticeably from others, demonstrating how "convention only becomes a cliché through overuse or when used by the numbers" (Drazen, 2004, p.19).

Sci-fi Anime is no exception to this, and though I have selected texts that represent as much as possible unique and varied aspects of fantastical and practical technological application, various archetypes from both the wider sci-fi genre and Anime medium are inescapable. Exploration of these set themes and their development help to underpin the perceived popular perceptions regarding the relationship between technology and society, and the hopes and fears regarding the effects of their continued process of amalgamation. Such a process, for example, can be seen in the distinctive genres of sci-fi and cyberpunk (both Anime and otherwise) of the nineteen eighties and nineties, developing into post-cyberpunk, steampunk and retro-science fiction, but still drawing on many aesthetic and thematic markers of their predecessors. As has been previously noted, there is presently a triumvirate of technological themes at work in sci-fi Anime, which consists of artificial intelligence, cyberization and bio-technology. The three key texts all employ some or all of these aspects in different ways, with different strengths and focuses, and like the convention and the cliché in their dualism, possess both positive and negative attributes in their depiction on screen.

These conflicts in Anime around issues of technology are centred around quite varied moral compasses. But while cultural and societal values regarding its encroachment may be explored in these texts, there is a more unifying, although another admittedly dualist interpretation, that often plays a large role in the debate regarding technology as well. This is the view of technology in terms of its accessibility and distribution; as a class struggle. This is very relevant in global terms when considering wealth and power between various peoples, from communities to nations. Advanced

technology go hand in hand with accessibility to resources, something that Masamune makes note of in his original *Ghost in the Shell* (1995), "Although largely excised from the film version, the original manga contained a good deal of political critique and dialogue like 'Emphasizing a lifestyle based on consumption is the ultimate violence against poor countries'" (Ruh, 2004, p.120). In Anime there are often radical discrepancies between the wealthy and powerful and common populace. Inevitably the technological elite develop an innate sense of entitlement and superiority. It has been particularly fashionable for such elitist societies in Anime to resemble Victorian England aristocracy or other classical periods of British and European high-society.[24] Such societies are almost always very cloistered and maintain a gauntleted wall around their culture, as much defined by their monopoly of technology as they do their high aesthetic tastes. There is an air of mystique that surrounds these societies, and their motives are often unclear or arbitrary. Both Darcia III from *Wolf's Rain* (2004) and Kano from *Texhnolyze* (2003) are prime examples of this, as are the societies they come from, the Nobles and the Class respectively, the names say it all succinctly. Such characters in Anime are often devout believers in the enforcement of their own aesthetics and ideology, in what often seems an arbitrary but totalitarian manner. Their worldview is based in the realms of beauty and elegance that are brought down by their pride, their infighting and the pursuit of dangerous technologies in their attempts to control the world. It's another analogy for nuclear apocalypse, and yet the beauty of their worlds remains an artefact of fascination. The castles of the Darcia clan in *Wolf's Rain* (2004) for example are majestic images of architectural gardens and palaces. It is not with revulsion these images are regarded. The other parties may make their moral claims about purity of cause, such as Kiba and the wolves, but they all are all striving for the same thing: Paradise, just with different personal visions of it. And there is the rub: the elite fancy themselves as the god-like inventors exerting their will over all creation and its evolution, and so would others if they had the chance.

The technological elite are an archetype as a collective entity in Anime. But there also exist specific character types; recognisable traits that set particular looks, moods and

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[24] One sci-fi series *Code Geass: Lelouch of the Rebellion* goes as far name its resident empire Britannia, whose lower lesser aristocracy are employed as regents in recently conquered territories, whose people are treated as second class citizens of the expanding empire.

mindsets about a character that dictate their role in a story. Specific styles of story will have specific sets of character types. This has already been mentioned in the case of cyberpunk, the cowboy hacker waging a guerrilla war against the totalitarian state. But this character has changed since the birth of cyber-punk in the nineteen eighties, and so too have other Anime character archetypes evolved. In the case of sci-fi they have been tweaked and adjusted according to changing attitudes and the appearance of new technologies as well as the need to create new stories.

Darcia III, of the Darcia clan of nobles.

The elite technological society.

Wolf's Rain, 2004, Tensai Okamura, Bones, 750min

One such character archetype has already been mentioned in passing in regard to the technological society; the Promethean creator, who inevitably brings about the apocalypse. I refer to them as the 'beautiful annihilators'. They are not always a part of the residing elite society, but they are always bishonen[25], exemplified by long flowing and/or white hair and have an eerie supernatural presence. They are often charismatic, cunning manipulators and invariably insane. Kano and Darcia III are both examples, though perhaps the most well known beautiful annihilator is from the *Final Fantasy VII*

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[25] A Japanese colloquialism meaning 'beautiful boy', used to describe beautiful and often quite effeminate young men and boys in anime and manga.

(1997)[26] franchise; Sephiroth. His name is indicative of his role; a seraph, powerful and beautiful, and bent on destroying the world in order to envisage his own. The drive of such characters is usually some combination of nihilism, revenge, idealism and ego, exemplified by the Proxies in *Ergo Proxy* (2006) who assault their imperfect creations due to the rejection and resentment and general dissatisfaction they endure in turn. Others in their insanity want to scour the world clean to create a pure one for themselves, perceiving themselves as divine beings in a tainted world, a mindset Darcia III and Sephiroth adhere to. Too often however they become an ironic image of humanity, the focal point of its destructive tendencies, and the product of human technological endeavours. *Ergo Proxy* (2006) presents one of the few variances on this well grounded archetype, in that Ergo Proxy himself manages to achieve some measure of resolution of his destructive tendencies and other psychological impairments. Most others are killed, or put out of their misery, depending on the standpoint.

The Supernatural Girl:

Cheza, the Flower Maiden, the key to Paradise.

Wolf's Rain, 2004, Tensai Okamura, Bones, 750min

By that same token, Anime heroes often fare little better. In fact many seem positively pathetic when set against the suave and seductive annihilator, convinced of his own sense of justice and purpose. They are most often teenage males, which in all

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[26] *Final Fantasy VII* is actually originally a Japanese RPG game developed by SquareSoft, but its visual style and themes have many similarities with sci-fi Anime and the game is world renown.

honesty is probably closely related to the target demographic of much sci-fi, especially the Anime kind. The characters range from social introverts, naïve idealists to pacifists, redeemed only by some hidden quality, ability or by their family lineage. For the most part they are unwilling participants thrust into a conflict they rail against having to be a part of. They are victims of circumstance or pawns being used and they all suffer greatly for their efforts, despite the often advanced weaponry, such as mecha, or supernatural or pseudo technological abilities on offer to them for their troubles: Ichise endures the amputation of his limbs and is repeatedly brutalised, Kiba is routinely bloodied and pacified, and Vincent/Ergo Proxy must struggle with the knowledge he is a bio-engineered schizophrenic deity designed to kill his fellow Proxies. The protagonists of the three key texts take their cue from a long history of such characters in sci-fi Anime. The recurring apocalypse seems small wonder in this genre, given the flaws of its protagonists.

The supernatural girl is another Anime staple of sci-fi. She is most often a direct personification of the particular form of technology that takes the place of priority in a text, usually of one of the triumvirate previously described, often representing either the prototype or the pinnacle of a new life-form or the key to unlock some greater technology. This has become one of the most indoctrinated Anime conventions, thanks largely to *Neon Genesis Evangelion* (1995)'s Rei Ayanami; the inhuman/supernatural girl who holds the key to knowledge and evolution, also known as the 'impassive waif' which "seemed to pop up all over the anime landscape" (Drazen, 2004, p. 304) post-Eva and have continued to do so. Again it is bio-technology which has now become the most popular form of her manifestation. Despite appearances she is often completely non-human, sometimes represented by white hair,[27] but is more apparent in their speech, habits and mannerisms. Cheza, the 'flower-maiden' in *Wolf's Rain* (2004) for example is a product of the Nobles alchemy and the key to opening Paradise. She does not eat, but 'withers' if deprived of sun and moonlight, and refers to herself via the removed third-person expression 'this one'.[28] They are also a lot of the time are a highly prized artefact

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[27] White hair in anime is indicative of a character being supernatural in some manner; this can also be seen in the beautiful annihilator character type.
[28] Much of the time these characters are emotionless, the impassive waif that Drazen describes, and often found in the company of the protagonist.

sought after by multiple parties, especially the beautiful annihilator, as she is often a requisite for the fulfilment of their goals. If they are not the key to some greater technology, then they are a new life-form that humanity may or may not choose to co-exist with or amalgamate with. Or humanity may not have a choice in the matter; they may change the world despite resistance. There are several sci-fi Anime that place what could be termed the supernatural girl as the protagonist. Both *Serial Experiments: Lain* (1998) and *Ghost in the Shell* (1995) can be interpreted this way. That such entities are always female has become considered by many to be a critique and metaphor for the changing roles of women in society, which would be of particular note in Japan. Or it may simply be that as these characters are perceived as being part of an evolutionary process or the start of an entirely new species, it only seems natural that the female should be the one to bring it about; it is where life comes from after all.

All of the various philosophical themes, technological theory and myth, socio-political ideology, visual aesthetics and the classic archetypes are all aspects of the sci-fi Anime canvas so to speak. In understanding the make-up of these worlds and the wider influences behind them, one can better understand the viewpoints and musings on the nature of humanity's relationship with technology, and the wider social and moral implications being explored. Some archetypes are recognisable as established codes and conventions of the genre and serve to distinguish it from other genres, pertaining to a particular mode of storytelling with a particular audience in mind. Others actively subvert such archetypes in an effort to question both the fundamental aspects of the genre, and the aspects of the technologies being represented. Sci-fi is ultimately a 'what if?' genre. It acknowledges the rapid pace of technological development and societies that are commonly in a state of limbo regarding their response; various parties voting for and against changes to the human race and its surroundings. A medium as malleable as animation has become an ideal playground for such a conjuring of new exciting and disturbing technological potentials, thus sci-fi has found itself right at home within Anime, as Napier attests to:

> Indeed, anime may be the perfect medium to capture what is perhaps the overriding issue of our day, the shifting nature of identity in a constantly changing society. With its rapid shifts of narrative pace and its constantly

transforming imagery, the animated medium is superbly positioned to illustrate the atmosphere of change permeating not only Japanese society but also all industrialized or industrialising societies. Moving at rapid-sometimes breakneck-pace and predicated upon the instability of form, animation is both symptom and a metaphor for a society obsessed with change and spectacle. In particular, animation's emphasis on metamorphosis can be seen as the ideal artistic vehicle for expressing the post-modern obsession with fluctuating identity[29] (Napier, 2005, p. 12).

If one understands the multitude of references, allusions and narrative conventions found in sci-fi Anime, the various moral standpoints can be identified and critiqued. Then the reasons why the threat of the dystopian, the apocalyptic, and all manner of other pessimisms remains the overwhelming perception of what technological development holds for humanity in the future.

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[29] This could also easily be linked to the hyper-consumerism of both Japan and the U.S. as well. The overall point is the apocalypse in Anime has become a 'vehicle' for social change and an ongoing endorsement of theory of the evolution, for better or worse. The anxiety that results is the fact that the evolutionary process that often takes place in such Anime often has such drastic changes that it seems a death unto itself in the eyes of the characters experiencing it. In either case, 'the end' is entailed.

Chapter II: The Apocalypse and Evolution

> The fear of destruction is also the joy of rebirth. – *Neon Genesis Evangelion*

> Perhaps one of the most striking features of anime is its fascination with the theme of apocalypse… images of mass destruction suffuse contemporary anime (Napier, 2005, p. 249).

To consider the apocalypse within Anime is to call up a wealth of titles with a history and development that spans the length of the Anime medium as a whole, appearing in a wide variety of guises, motifs, metaphors, with varying causes, resulting in equally varying aftermaths and even aversions. But across all of these there is an array of similarities that appear through repeated themes and narrative structure which this chapter will be critiquing. Why the apocalypse as an event and the post-apocalyptic world as a setting remain such iconic fixtures in Anime is directly due to the fact that Japan itself is from one perspective a post-apocalyptic nation, being the victims of the American conducted atomic bombings of Hiroshima and Nagasaki. The fact that these narratives have been so successfully transported to America and Europe suggests that for both religious and historical reasons, the apocalypse is not a concept and source of anxiety that is isolated to Japan. But before an account and analysis of these texts is explored and how these anxieties are manifested on screen, it is worthwhile to consider the makeup of the concept of Apocalypse which itself has a history and development, which has been interpreted in different ways.

2.1 The History of Apocalypse

From a linguistic perspective, the origin of the word apocalypse is *apokalypsis*, which is Greek, meaning revelation, a word that describes the disclosure of secrets regarding the true workings of the world. The confusion that has arisen in the (post)modern age is due to the word being used as the title for the Old Testament's Book of Revelation, which describes the destruction of the world and the final defeat of evil. While both apokalypsis and revelation have the same resonance in their meaning, because of the content of the Judeo-Christian text, "the most common understanding of apocalypse is as something on

the order of global destruction" (Napier, 2005, pp. 251-252). Why this should resonate so much with the Japanese, is proposed by Susan J. Napier to be due to two juxtaposed concepts. One is the "medieval notion of *mono no aware* (the sadness of things), an aesthetic philosophy emphasizing the transient and nature of life" (Napier, 2005, p. 253), the belief that the beauty of life is directly related to its impermanence. The other is ironically the spectacle of destruction, what Napier terms 'visual excess' or 'cathartic destruction'. The perverse beauty in the epic nature of apocalypse has created an adrenaline-fuelled aesthetic. The concept of the apocalyptic spectacle is also not limited to Japan, and takes many iconic forms from asteroids to extra-terrestrials seen in any number of American sci-fi films from the last fifty years. Neither is it limited to fiction, the spectacle of destruction being seen in most daily evening news reports covering wars to natural disasters. Another perhaps more mundane explanation is that the Judeo-Christian Revelation is simply well-suited to the (usually) human engineered apocalyptic narrative. "Neither traditional Buddhism nor Shinto envisions anything like the final battle between good and evil of Revelation"[30] (Napier, 2005, p. 250). The fact that Anime draws its apocalyptic visions from the Old Testament speaks multitudes for how these two vastly different cultures have found a common ground of anxiety and intrigue for their macabre sci-fi musings.

Visually complementing the religious aspect, and following the conclusion of World War II and the subsequent nuclear arms race, it is the atomic bomb which has informed literary and popular culture as to what the end of the world would look like. In terms of symbolism, it is the Mushroom Cloud, and the flash of white light, the atomic explosion, that has synchronized itself with apocalyptic vision and is an image which has become a prolific in its reproduction in the medium of Anime. And yet much of this vivid and spectacular imagery has increasingly become more about symbolism for apocalypse on the personal level, in light of great social changes. Not so much the end of the world, just 'the end of the world as we know it'.

In considering the commonalities of theme that exist within these Anime texts regarding the apocalypse it may be easier to consider them as a progression of thought,

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[30] This is not to say that apocalyptic Anime lack large scale war and epic battles, directly or metaphorically, simply that is this only one form of the many that Anime is relevant to, allowing for a more complex take on a traditionally black and white event.

which is how this chapter will be constructed. Beginning with the more literal portrayals of apocalypse and flowing and merging into the more complex metaphysical portrayals, this chapter will explore the perception of technology in regard to the role it plays in our greatest global fears, and how Anime connects it to the concept of evolution.

2.2 Humanity: The War against the Other, War against the Self

To begin delving into the basic perceptual links between technology and apocalypse we will explore one of sci-fi's hallmarks, specifically the Anime take on it. One form of the story a Western reader might well have heard of or be familiar with is the 'war with the machines'. The epic world-consuming struggle against an archetypal evil is a narrative that has been solidified as an archetype almost to the point of a cliché. Both the Matrix and the Terminator franchises represent the 'us and them' dichotomy (which could well be read as a metaphor for U.S. foreign policy over the last sixty odd years). The outgunned outnumbered forces of humanity wage an all-out war against the soulless implacable armies of machines. Anime has allowed for far more pathos. Indeed it even bestows it upon material which would otherwise stray little from its comfortable dualism. *Animatrix* (2003) was the result of the Wachowski brothers lending their franchise to several Anime directors who were allowed virtually free reign over the universe. Mahiro Maeda crafted a mythology for *The Matrix* (1999) from it, detailing the fall of human civilization, whilst being highly sympathetic to the plight of the machines.[31] The blame for the ensuing conflict that literally covers the planet in darkness rests primarily on the shoulders of those human beings who could not bring themselves to co-exist with the artificial intelligences they had created. The voice-over that introduces the two short-films of *The Second Renaissance* (2003) captures this reversal of worldviews:

> In the beginning, there was man. And for a time, it was good. But humanity's so-called civil societies soon fell victim to vanity and corruption. Then man made the machine in his own likeness. Thus did man become the architect of his own demise.

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[31] The text draws heavily on media and popular imaginings, such as the machines being portrayed as ancient Egyptian labourers, hauling immense materials up construction sites in a scene akin to pyramid building. When such androids become sentient and attempt to assert their possession of autonomy and civil rights, it is humanity who responds with mass destruction, and where images of mass graves and a 'tank-man' android become reminiscent of the Holocaust and the Tiananmen Square massacre.

But the war with the machines is but one narrative form of humanity's conflict with the 'Other'. In Anime the premise of many such stories is how would and should humanity treat an artificially created being, and what role would it play in human society. Such stories dictate that humanity desires the production of humanoid doppelgangers for comfort and convenience, but simultaneously dictates the human desire for its destruction when the product gets to be to life-like.[32] One author describes the first arc via the following:

> The desire of human beings to replicate themselves, intimating that the desire to fill the world with humanoid entities- and indeed to invest non-human animals with anthropomorphic connotations – does not stem from some god-given strength but from a fatal weakness and the concomitant need to compensate for such a failing (Cavallaro, 2006, p. 222).

Whilst another captures the second:

> In a near fixation on the artificial, technologized body – the robot, cyborg, android – the [science fiction] genre has tried to examine our ambivalent feelings about technology, our growing anxieties about our own nature in an increasingly technological environment and a kind of evolutionary fear that these artificial selves may presage our own disappearance or termination (Telotte, 1995, cited in Napier, Susan 2005, p. 11).

Thus the conceptualisation of the apocalyptic conflict with the Other is steeped in the tragedian mode and melancholy moods. The *Animatrix* is prime material but it is part of a collective of Anime texts subverting, in this case, cyberization and artificial intelligence as 'evil' forces. The machines in the *The Matrix* (1999), or Skynet in T*he Terminator* (1984), become another ironic mirror, and form a cycle of creation and rejection, such as can be seen in the Anime *Bubblegum Crisis: Tokyo 2040* (1998), in the berserk Boomer robots, combated by humans in another embodiment of Heinlein's 'mobile suits', the Knight Sabers. The irony of this apocalypse is this: "Technology and the huge modern corporations (who created the Boomers) are destructive of both the landscape and the

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[32] Whether we should have created them in the first place is generally regarded as a moot point, it is an archetypal vision innately conjoined to humanity's relentless drive for progress.

land. Yet the only way the Knight Sabers can successfully attack is to fuse with technology itself" (Napier, 2005, p. 96).

The madness of Lord Darcia III

Wolf's Rain, 2004, Tensai Okamura, Bones, 750mins

It is an ambiguous attitude to technology that Napier is getting at. "Wars are still fought in anime (many in fact), and warriors are praised for their fighting spirit, yet a pacifist belief in the futility of war tempers these messages" (Napier, 2005, p. 192). This ambiguity is embodied in several ways in Anime texts of this archetype. The first is the multitudinous perspectives offered in many texts which ascribes to no one dominant moral outlook or mindset. This is most notable in the three key and other post-millennial Anime texts. The combatants of such narrative are all allowed to express their justification for participation in such conflict, their morals and their grievances. Darcia III of *Wolf's Rain* (2004) is an excellent example. Despite being a villain in almost all traditional senses, including the bringer of the final apocalypse, he is also perhaps the most emotionally alive character of the series. His despair and mourning over his lover Hamona allow for such sympathy of an otherwise despicable character. He is a camp villain, and any conflict of which he is involved is never resolved into a true victory for either him, or the wolves, the humans, or the other Nobles, which is indeed the point of

the series, as its universe reaches its twilight.[33] In regard to the way Napier frames this ambiguity toward technological conflicts, what she denotes as 'nuclear sublime', there is a more personal level to the apocalypse that explains such ambiguous plots: "it is one of the basic paradoxes of apocalyptic destruction that, in its very magnitude of catastrophic intensity, it is both feared and welcomed" (Napier, 2005, p. 253). It is a feeling Ergo Proxy himself relates to, when he recalls his own apocalypse and rebirth, watching nuclear fire rain down on the city of Mosque. 'I'm sad, and yet I'm also laughing.'[34]

The second aspect is of the ambiguity of actual cause of the destruction. Often in Anime the actual reasons for the apocalypse or even the form of the apocalypse is left largely unrepresented in both audio/visual detail and in the general narrative. *Akira* (1988) is one of the earliest texts noted for containing this aspect: "the reason for *Akira's* destructive event is ambiguous, although events ultimately reveal that the destruction was by both technological and psychic forces" (Napier, 2005, p. 258). But this in all honesty, "doesn't make a lot of sense. How did the blast of psychic energy from Akira that destroyed Tokyo in the past start World War III" (Gresh and Weinberg, 2005, p. 173)? Similar questions have been asked (among the innumerable) of *Evangelion* (1995), such as why did Adam explode and wipe out half the human race when humans first found him at the South Pole, and why will he do so again if an Angel comes into contact with him? In Anime society such ambiguity has become a staple and a trend, and has been carried onto the post-modern era of Anime, being existent in all three key texts. The apocalypse in *Ergo Proxy* (2006) is literally regarded as a piece of trivia, a small trinket of information relayed in the surreal game-show episode 'Who wants to be in Jeopardy' (nightmare quiz show). The entire episode acts as a relay for what one might consider quite important plot information as to how such destruction was wrought, and even this is full of gaps. The only explanation given is that a chain-reaction of Methane-hydrate, humanity's new power-source after fossil-fuel, somehow managed to wipe out eighty-

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[33] There are many texts like *Wolf's Rain* in which the apocalypse forsakes all hope of survival, some even more so than *Wolf's Rain*, as it at least suggests an eventual rebirth of the world. Many others entail the apocalypse as simply destruction and end of all things, *Texhnolyze*, *Gilgamesh* and *The End of Evangelion* to name just three.

[34] That the remaining nuclear missile kept in Romdo is called 'Rapture', as one character discovers is another tongue-in-cheek way the series represents this mentality. Another acute example of this in its delirious prison-girl who narrates the battle between the Proxies Ergo and Senex and prophecies the apocalypse: 'When the battle is done, he will bring to this world a gift of death.'

five percent of life on earth. *Texhnolyze* (2003) is equally as vague; on the one hand it suggests that Lukuss was created as a form of prison for all the undesirables of the world outside: 'Inside every person, lives a monster that would make even the host himself, shudder with fear. The race that failed to hide their internal monsters, were driven to an underground purgatory.' Near the series end however, one of the dying Theonormal suggests however that people of Lukuss may have been isolated there because they were still capable of reproducing.[35] Much is implied, but much is left up to the audience to interpret, guess and assume. *Wolf's Rain* (2004)is perhaps the trickiest to pin down in terms of this because it adds in the spiritual and religious aspect of an apocalypse, which *Evangelion* proved earlier, effectively renders a text irresolvable in regard to the plot, again re-affirming only a vague event somehow related to technological misuse. Paradise is treated as both a blessing and a curse, being the pinnacle of achievement sought by the Noble Darcia I, which also managed to instantaneously bring down the Noble's empire: 'They blazed a path to the stars and opened the gates to space and time. But in an instant, all of it simply vanished.' When the event is repeated by Jaguara, nothing more becomes clear, other than that interrupting the 'spell' that opens Paradise proves the final undoing of the world, although why this 'spell' would cause meteor showers, earthquakes and the world to freeze over is anyone's guess.[36]

The third aspect involves what has become another archetype within sci-fi Anime. This is the secret council; operating in the shadows, they often turn out to be the instigators of the apocalyptic plot, with agendas and motives that are as difficult to ascertain as the apocalyptic event itself and their goal are usually one and the same. Again *Neon Genesis Evangelion* (1995) should be noted as a prime text in regard to this entity. The council in question is NERV and its parent organisation SEELE. "The New Genesis of the title speaks of what would (or could) happen in the angels succeed: humankind would be wiped out, and a new order would inherit the Earth. But is NERV part of the defence against invasion or is it really on the side of the angels? Or is it both" (Drazen, 2004, p. 301)? The answer is 'yes, no, kind of, not really, it's complicated'.

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[35] Nor will he attest to why the Theonormal have reached their abstracted ghost-like state and are waiting to die and never confirms if such a state is universal across the planet.

[36] Some of which could also be the natural occurrence of the world reaching the end of its span, so what is a natural occurrence and what is caused by Jaguara's spell is also ambiguous.

Comparing it to *Wolf's Rain* (2004) gives us a wider context to work with and understand this dynamic. A similar question here would be: are the Nobles on Cheza's side, are they trying to stop her, or both? The point here is specifics. In SEELE's case they want a specific being to be formed from humanity's evolution, and the angels are partially a tool for this, and partially an obstacle. The same can be said for Cheza. Darcia III needs her to open Paradise, but so does everyone else and each party wants a different kind of Paradise, thus Darcia III strives to create his own Paradise whilst preventing the wolves and Jaguara from creating theirs. So we inevitably end up back at the world-destroying conflicts, the secret council becoming simply another party. But the apocalyptic events are often due to the experiments and faults of such organisations in the first place, conducting their work in utmost secrecy then contending with the survivors to either repair or reattempt their work. The secret council has evolved along with many Anime archetypes, but they retain a dangerous mystique, of which the Nobles in *Wolf's Rain* (2004), the Class of *Texhnolyze* (2003) and the creators of the Proxies who are never seen or heard from in *Ergo Proxy* (2006), are all examples. Uniting them all through their progression is a perceived goal of the betterment of humanity, and the attempt ending in the creation of the Other which entails destruction. Whether the destruction is straightforward, or of the drastic changes previously mentioned, means that whether the goal of the council is ever achieved is also ambiguous.

The secret council's presence as a puppet-master in conflicts, and its portrayal as being the perpetrator of technological misuse is also closely linked with another organisation that rarely gets good press in Anime; the military.[37] There is a strong recurring theme in Anime that the military are entirely ill-equipped and ineffectual at combating the Other, and/or are directly responsible for its creation, meaning they are outright dangerous. In Gresh and Weinberg's words: "One of the basic beliefs in nearly all science fiction anime is that the military cannot be trusted"[38] (Gresh and Weinberg,

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[37] The secret council may even be a branch of the military, or somehow pulling the strings behind it.
[38] In a genre and a medium which is known for renouncing black and white outlooks, where aspects of heroes and villains are often intermingled and outcomes that eschew the dualism of victory and defeat for abstract and esoteric conclusions, it makes sense the military would have trouble adjusting. The military's nature of never questioning orders and devout even blind loyalty mean they are often the easiest to be manipulated or sacrificed callously.

2005, p. 181). The same assumptions are also applied to police forces as well.[39] In *Texhnolyze* (2003) the military take the form of the Shapes, the fully cyberized soldiers of Kano's new order, a symbol for totalitarianism and loss of individuality so Kano's 'proper ideology' can be enforced. The military in *Wolf's Rain* (2004) fair better, but they are ultimately ignorant and short-sighted slaves of the Nobles, as Tsume and Hige note:

> Those stupid humans are killing each other.
> And all for a Nobles glory.

Again there are issues of class and hierarchy intertwined here, but inherently it is the nature of the military to not ask the moral and philosophical questions that pervade sci-fi and Anime, and this is readily admitted; 'On the battlefield, a soldier never questions why he is fighting.' This line is from the military commander in *Wolf's Rain* (2004)*, and aptly represents the flaw and failure of humanity's militaristic outlook. In *Ergo Proxy* (2006) the portrayal of the military is rather scathing. In the ruined city Charos, Vincent finds a small army desperately holding out against the 'Knights' from another city, Asura. It turns out that while the Proxies of Charos and Asura slept, the humans waged war against the autoreivs, the Knights, decimating both cities because of human-racism, much to the chagrin of their creators when they awoke.

This warlike mentality is also inherited by the Other. This seems tragically fitting, that humanity's artificial offspring should inherit their warlike mentality and belief in the primacy of their own species and respond accordingly when that is threatened. This goes back to the war with the machines, but more specifically it is about viewing human behaviour through the medium of the Other in order to objectively critique it.[40] In this

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[39] *Bubblegum Crisis: Tokyo 2040* is again a good example of this as Drazen points out, and it can be applied to sci-fi outside of Anime. "The *Bubblegum Crisis* world is essentially reworked from Ridley Scot's *Blade Runner*: rogue robots commit mayhem in the streets of Tokyo, and the police are powerless to stop them" (Drazen, 2004, p. 171). The AD Police of the series are thus portrayed in a very atypical way.

[40] This dread of the other is also combined with nostalgic technology and imagery, in what Napier cites as the 'retro-apocalypse', Katsuhiro Otomo's adaptation of *Metropolis* being an example of this, due to nineteen thirties animation style and décor. *Full Metal Alchemist* and *Wolf's Rain* would also make fine examples of retro-fication, the threatening other being the homunculi and the Cheza of the Honabito respectively, who both represent the misuse of 'technology' in the post-modern alchemy aspect being the driving factor of a conflict. In conveying the concept of mutual brutality *Elfen Lied* is also deserving of mention. Although the manga is more in depth, both it and its Anime adaptation follow the persecution of a mutant strain of humanity who possess telekinetic abilities, who have become the tortured and traumatised victims of, fittingly enough, a secret government organisation. Upon escape the mutants exact their brutal

way sci-fi Anime subverts the concept of humanity's pre-eminent status as the dominant species as permanent or even actually applicable in the first place. This Other does not even have to be of human design, but can stem from a natural evolutionary occurrence. But humanity's affinity with nature is often as tenuous as its affinity with technology if not more so, something Anime has also drawn on in concepts such as nature versus civilization. Nature is a vast system of animal, plant and bacterial species which humans were once a part of but have since created new networks that are largely isolated from nature, this could potentially, if not partially already, leave co-dependency with nature behind. Equating this with the growth of the technological Other suggests the possibility of destruction of the eco-systems and networks of nature. This presents another kind of dichotomy and an interesting question; what should civilized humanity be a part of, the networks of nature or the networks of technology? That the self and the Other is a polarizing concept questions how nature and human endeavour could possibly co-exist. When the endeavours themselves produce such conflicts amongst humanity this seems even more impossible to answer. The same ambiguity of humanity's conflicts with technology is present in their conflicts with nature.

This is evident in Miyazaki's *Nausicaä of the Valley of the Wind* (1984) and *Princess Mononoke*. Neither have any clear answers as to how an equal co-existing relationship might work, both seem to suggest that the two concepts should maintain their separateness. Bio-technology further blurs the line between the natural world and technological endeavour. Mahiro Maeda's *Blue Submarine No. 6* (1998) presented the interesting concept of a scientist creating bio-engineered creatures with the specific intention of forcing humanity to communicate and learn to live with nature, which now possessed many sentient species. This only leads to a war that further decimates the planet which has already been rendered virtually inhospitable for humanity, and vicious cycles of revenge and retribution between the human civilization and the augmented natural world.

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revenge indiscriminately on all humans they encounter, exemplifying how humanity has taught them to behave towards lower life-forms.

This is another rendition of the apocalypse, viewing it from the angle of a revenge fantasy. Many characters that form the Beautiful Annihilator[41] archetype can be viewed this way, and this vicarious angle is what allows for much of the sympathy they engender which renders them as multi-faceted characters. It makes the havoc that Darcia in his rage wreaks in *Wolf's Rain* (2004), or the destruction wrought by Tetsuo on Neo-Tokyo in the much earlier *Akira* (1988), personal. This is another apocalyptic mode that Napier cites: "Cathartic destruction, often related to revenge fantasies, is the most basic element of the traditional apocalypse, allowing the reader/viewer the pleasure of watching the end of evil or danger" (Napier, 2005, p. 263). Thus it allows audiences the opportunity to be complicit in such evil and experience its own morals and emotions. Sci-fi Anime is full of resentful characters seeking vengeance on their wrong-doers. These personal apocalypses are often as much about failed relationships as they are about the world ending and the two may be one and the same. This metaphorically personal apocalypse will be discussed in detail later. *Wolf's Rain* (2004) is part of the third group that combines the global and the personal, an apocalypse brought about by interpersonal disputes whereby Darcia III kills the jealous Jaguara, for killing his lover and her sister Hamona. He thwarts her attempt to recreate Darcia I's spell that caused the first apocalypse and thus starts the second. The world is effectively ended by a love-triangle, a failure of human relationships.[42]

For Anime, especially in "contemporary texts, the destruction of evil is less important than simply destruction itself" (Napier, 2005, p. 263). Thus who is at fault or who deserves to be punished becomes, again, flat out irrelevant and the narrative becomes more about "the orgiastic excitement of the wild forces let loose, destroying everything just to feel alive"[43] (Napier, 2005, p. 263). Napier points to *Akira* (1988) as an epitome of the modern spectacle pleasure, and another theorist she cites, Jean Baudrillard, coins the phrase; the "obscene ecstasy of alienation" (Napier, 2005, p. 263),

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[41] See Chapter 1: Codes and Conventions, Persistent Themes and Archetypes
[42] The same nuance can be seen in the violent meetings between the god-like and outright manic-depressive Proxies in *Ergo Proxy*, or the rejected homunculi of *Full Metal Alchemist* or the mass-murdering mutants of *Elfen Lied* and even the abstract and entirely alien angels of *Neon Genesis Evangelion*.
[43] Such perspectives are needless to say, lacking in the Book of Revelation, which is concerned only with smiting those destined to go to hell, and glorifying the righteous and the faithful. There is no time wasted on the tragic plight of the damned and the personal salience they are allowed in Anime and what their feelings may be.

which is an exemplary way of describing the personal apocalypse and the vast array of depressed, introverted and just straight neurotic characters with strong themes of loneliness, longing and regret. The apocalypse in Anime is a well-rounded experience, its conflicts being simultaneously implosive and explosive.

All negative emotions portrayed in such texts revolve around human desire and individuality. Part of this is to do with commentary on the human obsession with material gain, but it also is simply indicative of the instinctive human directive to better itself both as a collective and as individuals. This is the cause to which technology has been devoted, but in Anime the cause also aligns those opposed against each other in bitter conflict.[44] The character that best embodies the necessities of apocalyptic conflict; desire and individualism, is arguably Rau Le Crouset from *Gundam SEED* (2002). Rau is a clone, a product of the human desire to control its genetics. Through Machiavellian manipulation and treachery he pits the elitist, genetically engineered Co-ordinators living on the many space colonies against puritanical Naturals on Earth, in the hope that they will annihilate each other, forever ending the cruel cycles of human desire that result in genocidal carnage. He seeks a quick resolution to what he sees as an otherwise slow, grinding, and agonizing but inevitable fate of the human race through continued slaughter. In the climatic final battle he contends both physically and verbally with the protagonist, Kira, endorsing the ideology he is enforcing:

> You shouldn't blame me! This is mankind's dream! Mankind's desire! Mankind's destiny! To be the strongest, to go the farthest, to climb the highest! To compete, to envy, to hate each other, and devour one another!

Rau is killed, but even as the two sides begin to reconcile, his words maintain a fortitude and poignancy that is never successfully dissipated.

Ambiguity due to individualism is the most important theme here. In Anime it is what leads to conflict, both ideological and egotistical; struggles over how humanity should use technology and who should use it. Most often this leads to the creation of the

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[44] The expression that 'even an ocean won't fill a bucket with a hole in it' is most apt here.

Other in its innumerable forms, whether it is technological elitists or new life, all of it is met with hostility (and even without hostility, accidents happen).

2.3 Weapons and Accidents of Mass Destruction

The desire for betterment at first seems reasonable aspiration. Science-fiction in general however has long been a means for pointing out that the same drive for improvement and utopian idealism brings with it many dangers as humanity begins to over-extend itself, experimenting with technological processes that are not fully understood, and lacking the foresight to see the long-term affects of their implementation. The hungry competitive nature of humanity need not even result in open conflict; sometimes all that is required is an inquisitive nature that accidentally unleashes some unknown force. These are related to the ambiguous apocalyptic events that are not very often clarified in sci-fi Anime and yet such events are integral to the desolate, ragged forms of these worlds. It is entirely possible that part of the point of such vagueness is to further emphasize that those involved in such undertakings knew not nearly enough of what they were doing.

One of the first examples of these kinds of *faux pas* is the accidental nuclear detonation. During the cold-war, the sheer amount of nuclear armaments being stockpiled and the tensions between America and Russia made the prospect of someone 'hitting the button' so to speak, just out of simple panic, seemed quite plausible, that or the possibility of simply an accidental detonation rather than a launch as such. The accidental detonation of a metaphorical nuke is one of the most recognizable images in sci-fi Anime. The image of the spherical explosion that engulfs Tokyo in *Akira* (1988) is the most famous image of this event. The accidental nuclear event that in an instant thrusts the world into the post-apocalyptic has innumerable representations in Anime, and many of them occur with at least understandable motives in mind (*Akira* (1988) is not one of these however; the creation of mentally unstable psychic children capable of city-wide destruction is never seen to have a practical purpose of any kind and serves only as an example that "the ultimate weapon may in fact be too much for us to handle" (Drazen, 2004, p. 199)). The Second Impact of *Evangelion* (1995) is equally mysterious; the awakening of Adam, the great being of light, is first proclaimed to the public as a meteorite that hit the earth, but even after the truth is revealed, the plot detailing the

Human Instrumentality Project as a supposed means of both evolution and spiritual enlightenment of all mankind effectively, or what's left of it, remains subjective. Whether SEELE was aware of the catastrophic destruction that would be unleashed when Adam is awoken is a matter of speculation.[45] *Origin: Spirits of the Past* (2006) is truly unique in its visual and thematic take on such a 'detonation'. The film fuses images of the pseudo-nuclear apocalypse with a rampant supernatural forest reminiscent of Miyazaki's threatening nature-based worlds. Concerns over Bio-technology allow this fusion of explosive imagery, which is at once an obliteration of human civilization and a rampant acumen of growth of an anthropomorphised forest. *Origin: Spirits of the Past* (2006) treats the tragedy with the same matter of fact mentality, with little sympathy for humanity who unleashed their own demise, but acknowledges at least, what is perhaps the noblest intentions of technological use in Anime. An artificial plant is developed on the moon to repopulate the forests on Earth, but its accelerated growth exceeds all expectations and preparations and the unstoppable growth tears itself from the moon and plunges down to Earth. The image of the forest in the form of a dragon plummeting down to Earth to consume the surface is one of the most beautifully absurd images to be produced from Anime in recent years. *Wolf's Rain* (2004) is another accidental nuclear metaphor with heavy spiritual overtones. Darcia I's attempt to open Paradise treats such a case of attempted spiritual enlightenment inevitably as an act of selfishness, which brings the near-Immortal empire of the Nobles crashing down and drives supernatural Wolves to all but extinction. This is a very esoteric interpretation of nuclear imagery reminiscent of the series' dual messages of hope and doom for those seeking it, which relates to a

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[45] *Gilgamesh* has a very similar pseudo-techno-spiritual theme which bears many similarities to Second Impact, referred to as Twin X, but has its mythological links in the Babylonian epic of Gilgamesh. The event is intentionally incited, but by one rogue scientist. The event blocks out the sky with mirror-like surface and releases what might be termed a worldwide electromagnetic pulse which prevents most electronics from working. War and famine ensue. The event also produces two breeds of psychic children and like *Evangelion* its plot revolves around the creation of a new humanity to inhabit the planet.

    Cowboy Bebop is home to another such accident, one even more cataclysmic than Second Impact but more straightforward. A warp gate designed for quick transportation between the planets collapses, which fractures the moon sending devastating meteor showers and radiation upon Earth, killing the majority of the population and driving the survivors either underground or out into space to colonise other planets in the solar system. What is interesting is how such events are glossed over, information regarding such global tragedies is Anime is almost universally hard to come by, and may not even be part of the main plot at all. The stories of *Cowboy Bebop* are focused purely on the crew of the title's spaceship, their everyday lives and encounters. It's effective as a means of normalising the characters environment, and naturalising their everyday lives in fantastically fictional environment makes for great verisimilitude; it also implies however that despite great tragedy, humanity is incapable of changing much.

'cathartic destruction', to a dread and desire for apocalypse occurring simultaneously. Relevant to the new millennium, and a theme gaining momentum in sci-fi Anime following it, is the need for an alternative energy source to fossil fuels which the series draws on. In *Ergo Proxy* (2006) the Proxy MCQ simply relates that a chain reaction of Methane-hydrate, humanity's most effective answer to alternative energy, explodes in a chain-reaction.[46]

Cathartic Destruction: the macabre beauty of 'Rapture'.

Ergo Proxy, 2006, Shukou Murase, Manglobe, 575mins

These events are not always shrouded in metaphor or ambiguity either. *Gundam SEED* (2002) in particular makes use of nuclear warheads in the literal sense, amid the arsenals of mecha and spaceships. Nuclear warfare in the series serves as the catalyst that begins the conflict between the Naturals of the Earth Alliance and the Co-ordinators of ZAFT. When one of the Plants, ZAFT's space colonies, is annihilated by a nuclear missile fired by the Earth Alliance, this results in the genocide of an entire city of civilians that becomes colloquially known as the 'Bloody Valentine Incident'. The event serves as a call-to-arms event for ZAFT with the slogan 'remember Junius VII'. The ensuing war is a classic example of Bio-Luddism or 'human-racism' being employed in sci-fi Anime, that

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[46] It is later related that some people escaped on the Boomerang Star, but it is implied this consumed the remainder of humanity's resources, and many were left behind on the wastelands of Earth. The creators assumedly made the Proxies on the Boomerang Star and released them across Earth to begin the rebuilding of civilization. It is a process that Vincent implies at the end of the series, has taken a long time: 'For the first time in thousands of years, mankind returns to meet its earth.'

of humanity's refusal to accept the existence of genetically engineered life-forms. Much of the conflict in the series revolves around the theme of genetically engineering humans and the prejudices they endure from the rest of humanity, which incites the creation of greater weapons of apocalyptic destruction. *Ergo Proxy* (2006) also makes use of classic nuclear missiles, though this is not the cause of its desolate environmental state. The missiles are seen raining down on the city of Mosque in Ergo Proxy's dreams and memories. The keeping of nuclear weapons in an already post-apocalyptic world seems in rather bad taste, and this is noted with ironic disdain by Raul Creed, the then former-Chief of Intelligence, only made more ironic by the fact that he fires it, again at Mosque, as if to demonstrate the very stupidity of it:

> You set aside an ancient thermo nuclear device for who knows what foolishness. Then you proceed to give it the criminally ridiculous nickname Rapture! I'm surprised it took this long for something to go wrong.

A nuclear weapon called Rapture is perhaps the most darkly humorous aspect of the series, capturing the dread and desire that is beheld for the apocalypse. Watching the missiles travelling with a sublime trail of fire in both instances endorses this concept with a macabre beauty.

One of the other forms of accidental apocalypse also alludes to classic nuclear imagery, yet receives little play in Anime. It is still however worthy of note as one of the popular apocalypses envisioned for humanity in sci-fi media. The engineered or even naturally occurring pathogen or virus has a lot more screen-time in American films such as *12 Monkeys* (1995) and *Resident Evil* (2002) and the *Andromeda Strain* (1971). One theory for this arising is that due to humanity's supremacy over other life-forms "the only thing that might threaten humanity's survival is an accidental plague virus or unknown highly lethal epidemic caused by our own tampering with the genetic cord" (Gresh and Weinberg, 2005, p. 184). Anime usually interprets such 'viral' apocalypses via the bio-technology route, which is always infused with intense imagery, as opposed to Anglo-American films whose viruses are 'imageless', lacking a visual motif.[47] The tampering of human genetics has a strong detrimental emphasis in Anime, the aforementioned linked

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[47] The bio-engineered forest of *Origin* becomes akin to a virus in its hostile takeover of the planet.

themes of genetic engineering and infertility appearing in multiple texts which have already been mentioned.

There is one final aspect of the accidental form of apocalypse, which again is gaining greater relevancy in the post-2000 era. Rather than one monumental gaff that sets off an immediate and catastrophic chain of events, this is an issue that is growing in successive increments; the overpopulation of the planet. Gresh and Weinberg state: "Sooner or later a solution has to be found the "population bomb" or humanity will sink back in on itself and self-destruct. Such is the premise of hundreds of dystopian novels written over the past several decades"[48] (Gresh and Weinberg, 2005, p. 110). Anime does not often consider the problem of over-population (though the Gundam universes are an exception). Being rife with world-scouring apocalypses usually ensure wide open (barren) spaces are guaranteed, but nothing else is. Immigration is becoming more of a recurring issue, and this has some links to over-population, but in Anime, as can be seen in *Ergo Proxy* (2006) and *Ghost in the Shell: Stand Alone Complex* (2002)[49], it has more to do with class struggles and social hierarchy that is prejudicial against immigrants who are often seen by the rest of society as cheap labour, thus conflict ensues, and it is back to square one.

The accidental apocalypse in Anime can literally be a nuclear event, or a metaphor for other technologies. What is important to remember is that they are representative of a totalising fear of complete destruction. The fear is derived from the belief that humanity is delving into technological processes that it does not fully understand, and that such over-extensions could mean our extinction or at least irreparable damage to ourselves or the planet.

2.4 The Stagnation of Human Evolution and its Inevitable Extinction

What is important to remember in many Anime is that the apocalyptic event is very closely tied with theories and beliefs surrounding evolution and rebirth. This is the key element that separates it from the more straightforward Anglo/American popular

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[48] This is also an issue that has been more associated with American sci-fi such as *Starship Troopers*, which used space colonisation as not just a solution to humanity's mushrooming population, but as an impassioned goal of expanding the empire.
[49] Specifically in the 2nd series: *Ghost in the Shell: Stand Alone Complex 2nd Gig.*

perception of the apocalyptic sci-fi hostile takeover scenario. Dystopian Anime texts draw on very similar motifs and themes such as the 'nuclear accident' or the 'war with the machines/mutants/nature scenario', but are often infused with more messianic overtones. Conversely, in the texts that will be cited apocalypse often occurs due to what is seen as the stagnation of human evolution, which lends itself to an almost natural pessimism by which extinction appears to be an inevitable outcome. This lends many of these texts large overtones of prophetic doom and divine justice, but they are ultimately linked to humanity's state of evolutionary inertia. This section explores the defeatist attitude in sci-fi Anime that creates an atmosphere endorsing the inevitability of human decline and extinction.

Embracing and defying the 'Malice', two halves of a bio-engineered god begin their inevitable confrontation.

Ergo Proxy, 2006, Shukou Murase, Manglobe, 575mins

Part of such an inevitably links back to Napier's 'cathartic destruction' that has been earlier mentioned[50]. This is perhaps the most self-explanatory aspect of apocalyptic narrative when spectacle is involved, subverting what would otherwise be called pessimism; the apocalypse as a plot point is inevitable because it is the main event. The demise of the last human cities is a common motif and visual spectacle in Anime, the pinnacle conclusion and embodiment of tragedy and 'mono no aware'.[51] One such spectacle is the struggle between Ergo Proxy's two selves as the city of Romdo begins to

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[50] See Chapter 2: Section 1 - The History of Apocalypse

[51] Such a description seems more befitting of melodrama, but Anime is as much a vocally intellectualised pathos and philosophical event as it is the apex of explosive emotions and enmities, a show of force representing opposing ideological frameworks.

fall apart around them which exemplify the 'malice implanted by the creator',[52] an ideological struggle between preservation and resolution, and revenge and rejection fuelled nihilism. This is the physical battle of a living god, the personifications of his psyche decide the fate of his cradle of creation. 'This is the way our world ends, except-you will live Vincent, it will be the most fitting punishment for the creator.' As the nihilist side of Ergo Proxy describes, the ideal punishment for one who creates a flawed world is to witness its destruction and yet survive, the point being the pointlessness of creation. Rapture is another way of tying this inevitable destruction into a viable aesthetic experience as well as a philosophical one. Through similar but tweaked perceptions of conflict and destruction, with links to the revenge fantasy, it allows for the experience of the defeat of what is perceived to be evil, even at the expense of global destruction, which is classic Book of Revelations material. In *Ergo Proxy* (2006) this would be the destruction of Proxy 1, Ergo Proxy's doppelganger schism, his knowledge and his acceptance of himself as a god, as he stands amid the ruins of Romdo, with most of the populace implicitly crushed underneath. The same could be said for both Jaguara's and Darcia III's deaths in *Wolf's Rain* (2004), the world-destroying aspirations and conflicts of the selfish Nobles seeking their own individual Paradises is inevitably cast down, and the wolves and humans join them as the world freezes over in a manner not unlike a nuclear winter.

Such Anime texts are also representational of the fantastical element that has amalgamated itself with sci-fi Anime and operates as a platform for apocalyptic rhetoric. All three key texts embody the aspect of prophesy in some form or another, and even in multiple ways. *Wolf's Rain* (2004) is the most explicit exhibitor of this aspect. The book of the Moon, previously recited, might even be argued to draw from Revelations: '-only then will appear, the wretched beast.'[53] The series also contains a scene whereby a Noble consults a seer and receives a literal 'Prophecy of Doom'.[54] The humans, who are excluded from any Paradise, also sink into despair, knowing that neither this world, nor

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[52] Another is the battle between the bio-mecha Eva's amidst the remains of Tokyo-3, the character Asuka's moment of rapture as she dismembers the humanoid Eva's, a battle with wider reaching implications to those who accept SEELE's belief in an evolved humanity and those who see it only as death.

[53] Meanwhile Kiba simply must withstand not just prophecy, but almost complete disillusionment in a concept such as Paradise.

[54] 'Hear me accursed of the earth. Your wretched world will never rouse from its perpetual slumber and through devastation be lured into a darkness that transcends the night.'

what is essentially the afterlife, has a place for them. The characters Hub and Cher discuss their futility and inevitable deaths:

> Do you think there's a chance we could go there too?
> No. I doubt it.
> Then what the hell are we supposed to do?
> The only thing we can do: die out.
> Why?
> Because the world would become distorted with us in it.

In *Ergo Proxy* (2006) it is the Pulse of the Awakening, the programming that drives Ergo Proxy to destroy his own kind when the Proxies are no longer needed, referred to also as 'the malice implanted by the creator'. Ichise in *Texhnolyze* (2003) must also contend with a natural instinct toward rage and slaughter, as well as prophecy from the seer Ran, that 'In the end you will destroy everything. You will hurt many people. You will be all alone in the end.' The inevitabilities have the double-edged affect of lending both futility and epic proportions to their development as characters and their supernatural goals, riling against prophetic despair.

The prophetic aspect of these series is an effective means for creating aesthetics of a grand operatic tragedy. The technological aspect is more difficult to pin down without simply attributing it to a sci-fi dystopian mindset indulging in Shakespearean tragedy. What about technology is thought to be the cause behind an inevitable extinction, and more specifically causing humanity's evolution to stall? Part of it, in a perhaps and ironic sense, is lack of competition, humanity's supposed mastery over the natural world, the way "humankind is making itself extinction-proof by modifying the plants and animals that still exist in our world to our norms. We've eliminated the survival of the fittest part of Darwin's Theory by eliminating anything that might threaten our survival" (Gresh and Weinberg, 2005, pp. 183-184). In Anime this can be linked to environmental destruction but it has much wider application. The removal of risk and threat removes the need to evolve except as humanity chooses.[55] Thus human

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[55] This allows humanity on the one hand to focus its attention on what perceives as 'higher' pursuits, which brings us back to aesthetics. This can be seen in the pomp of the higher classes of people who in Anime are also most often the masters of technology. The Nobles of *Wolf's Rain* and the Class the Theo-normal in

competition occurs within the species, and they fall prey to the 'vanity' the Maeda introduces in *Second Renaissance* (2003). The aesthetic focus inevitably gives way to pettiness and corruption and arbitrary ideology. So when members of such an elite society do find cause for conflict, to an outsider the reasons appear very aloof and inexplicable, because its only context is within the society itself, and is ultimately an exertion of ego. Kano captures this excellently with his 'proper ideology', conquering Lukuss and forcing its citizenry to undergo a full-body texhnolyzation process, becoming the Shapes. His justification is heavily cryptic and symbolic, but belies a very simple notion of totalitarianism, his right to rule.

> A huge council system led by a mind that lacks self awareness; that is impure. Things must be pure and more arbitrary, sophisticated egoism and style are needed. Consider that any masterpiece, could be reduced to an absolute failure by having another person add a brush stroke to the painting. Harmonious order is just an illusion. Let me share with you how a city should be. I will change this city…

The Proper Ideology: Kano's transformation of the people of Lukuss into the Shapes

Texhnolyze, 2003, Hiroshi Hamasaki, Madhouse, 550mins

Kano's 'ideology' possesses such technological backing, that it cannot be defeated as such, but the resistance by other influential figures in Lukuss and their organisations means the death toll is so great that Lukuss is eventually rendered lifeless. The love triangle that ends the world in *Wolf's Rain* (2004) also deserves a note, as it represents

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Texhnolyze would be the embodiments of this. There is no force that can contend with their authority except themselves, the rest of society is brought to heel, sometimes severely.

the elite of humanity arrayed against each other. Because of the highly developed capabilities of this section of humanity, its competitiveness is so efficient that it will wipe out humanity as a whole with several devastating blows when brought into conflict.[56]

The question that occasionally comes up in sci-fi is; where do we expect the ultimate goal of technology to take us? If there is a final rung to the ladder, and the goal is eventually, at some point in the far distant future, for humanity to attain immortality or even deification, would that provide satisfaction? Not according to Anime, where "the few depictions of immortality in Japanese pop culture usually show that eternal life has a very steep price" (Drazen, 2004, p. 216). There is a strong belief in Anime that the search for immortality corrupts and causes insanity. There is a belief that if humanity reaches a pinnacle, a state by which there is nothing left to experience, then there is nowhere left to go and no point in survival. Darcia I muses on this, and creates a mind-frame that demonstrates the esoteric perils of unlimited potential:

> 'When are we born, when do we die? Why are we born, whey do we do? The world has been destroyed and reborn countless times… …We have acquired the means to exceed our natural span of life, never suspecting that the world itself was finite in its existence.'[57]

Again it seems the nature of sci-fi and its Anime component especially, to offer few positive outlooks for the humanity's technological progress and pursuit of knowledge. Revelation-style Prophecies of Doom warn of technology's dangers but inevitably go unheeded as humanity attempts to future-proof itself. Yet as a result it finds it has become at war with itself. Revenge and egotism in Anime drive inevitably toward

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[56] In Anime it usually takes two, the main apocalyptic event that creates the dystopian landscape, and the second that finishes civilization off. The two attempts, once by Darcia I, and once by Jaguara to cast the spell that will open Paradise are examples, as is the chain reaction of Methane-hydrate, followed by the Pulse of the Awakening, parallels can be drawn right back to *Evangelion* and *Akira* in this regard.

[57] There is also the theme that exists on the nature of truth and misery. The three key texts all have characters that evoke this concept, contending with the prophecies and eventual truths and inevitabilities set against them. *Ergo Proxy* explores this theme in depth; Re-l relates how her curiosity would not allow her remain happy, as she learns of the world beyond Romdo, about the Cogito virus, and the Proxies. The encounter between Ergo and Kazkis and Kazkis' dying words illuminate rather poetically this outlook: 'All those who wander in darkness seek the light, but when they reach the light they turn their eyes away from the blinding glare, you can even sense the pain. The truth is like that too.' The dementia and schizophrenia that the Vincent/Ergo Proxy personas endure, in their status as a god, stands as testament to this statement.

the spectacular apocalypse that is both reviled and revered. But that hardly means efforts are not made to avert it.

2.5 The (Attempted/Unnatural) Rebirth of Humanity

The pessimistic belief in inevitable human extinction co-exists with another thematic device which is the unnatural rebirth of humankind as an attempt to escape inevitable and natural demise. This is a concept which has been developed in a number of Anime and portrays the evolution or preservation of the human race in the face of extinction as an affront to some kind of natural order. It often includes graphic depictions of the extreme methods that are used to prolong human existence and its evolution, whether it is cyberization, artificial intelligence, nano-technology or genetic engineering (along with the usual rape and murder that are portrayed as being so instinctive to humans, sometimes even some incest is thrown in for good measure).

The point being made is that the methods used to initiate such a 'jump start' of evolution are often so extreme that the changes faced by people can be seen as a death unto itself, and may even include culling people on the scale of genocide. Gresh and Weinberg cite *Akira* (1988) and *Evangelion* (1995) as prime examples of this: "It is interesting to note that in both animes that jump start mechanism involves some sort of immense explosion killing millions of people" (Gresh and Weinberg, 2005, p.181). The life-forms that are in some texts created from such events that are either supposed to 'be' the new humans, or help pave the way forward, are perceived as being so threatening or grotesque that they are rejected and attempts are made to abort or destroy them. The monstrous forms of the Proxies, the gods who are rejected by their creations are a prime example.[58] This can lead to more extreme measures to ensure a turn-around that preserves the current 'pure' state of humanity and prevents evolution, even if it ironically means complete annihilation of both parties in the process. To accomplish this the creation of an object or creature designed to destroy the Other is deployed, but is beyond the control of the creators, a convention that again alludes to or even directly comments on mankind's use of nuclear weapons or uses nuclear imagery as analogous of other technologies.

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[58] The Diclonius mutants from *Elfen Lied* and the monstrous forms of the Gilgamesh children in *Gilgamesh*, who both possess telekinetic capability and both are accompanied by different but equally grotesque imagery are also examples.

Texhnolyze, 2003, Hiroshi Hamasaki, Madhouse, 550mins

Texhnolzye (2003) also has deep set themes of this unnatural evolution. The character Doc believes that it is through texhnolyzation; amalgamating humans with their intelligent prosthetic limbs and linking them directly to nervous system can re-establish evolution, despite much abhorrence to the technology that is portrayed in the series. One antagonist of the series, Yoshii, calls her a 'Goddess with the power to mechanize humans'. Kano seeks a unification of Lukuss and also a subsequent evolution through the Shapes, who enforce his obsessive ideology and abstract aesthetics. They are his means of preparing Lukuss to become a new life-form resulting ultimately in failure and the death of the city itself. Like other key texts, there is a belief in the futility and abnormality of all of these efforts. A lot of this discourse is conveyed through the connection Anime portrays between infertility and bio-technology. The Class for example has issues with reproduction. As Kano reveals they are forced to resort to incest to produce offspring, including him[59]. Kano says of his mothers: 'They gave birth to father, mated with him, and gave birth to me. I wish I could've torn their wombs apart when I first came out.'[60] Another 'unnatural' aspect of texhnolyzation is that it is

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[59] Doc, who came from the above world and used to reside with the Class, is also revealed to be infertile. Those of the world above have long ceased to reproduce as well, and despite their supposedly invulnerable 'bodies', are slowly disappearing.

[60] There are also other examples. Such as Doc, on several occasions incapacitating Ichise and having intercourse with him, yet she refers to herself as his mother, as it is her cells she used as the bio circuits in Ichise's texhnolyzed arm and leg.

powered by Rafia, which is stated by Yoshii as being the city's raison d'être, mining it to send to the Class and the people in the above world. Rafia is mined from below Lukuss, and is speculated by one character, Toyama and eventually confirmed by the chief of Gabe, that the moss and Rafia flowers are formed from dead bodies. That the human species can supposedly only continue living via what is effectively necromancy, makes a poignant and morbid image of the second life of humanity in the series. Doc even refers to the Rafia stage of texhnolyzation as the 'black magic' phase.

    Ergo Proxy (2006) conveys this message through another means. In the aftermath of the apocalypse, space-borne humanity creates three hundred Proxies; artificial and disposable deities and sends them down to Earth to begin readying it for re-population. They miscalculate the conditions on Earth however, which is still inhospitable, and the only means for the Proxies to create inhabitable spaces is the construction of the Domes. They populate these with artificially grown humans through the womb-sys, and construct the first autoreivs. It is implied however that these populations of humanity are not accepting of the deities that create them and reject them. In rage and despair, at least several of the Proxies destroy their creations, including eventually Ergo. Others forsake human company for that of autoreivs, or fail to prevent conflict between humans and autoreivs which destroys the Domes, or they turn them into surreal playgrounds. There is a mutual dissatisfaction between humans and Proxies that is all consuming. This represent sentiments of both inevitability and futility, implying that humanity is incapable of resolving its destructive tendencies, to bring it back to the world that it destroyed in the first place will only see them destroy themselves again. Or more simply that human extinction is inevitable, and all attempts at aversion and resurrection are perverse and futile.[61]

    From this perspective all technological attempts to restart human evolution possess grotesque attributes that become closely associated with concepts such as incest and necromancy. Keep in mind however, this can all be metaphorical.

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[61] It also represents the divine aspirations of technology, a living heresy that represents the conflict between science and religion, as they battle to inscribe themselves on the supernatural plain.

2.6 The Psychological and Social Apocalypse

The metaphorical aspect of apocalyptic Anime separates many texts out from more traditional imaginings and interpretations of apocalypse. This is the event in which the apocalypse does not simply denote the physical destruction of life on the planet. Titles that came to prominence, for the first time both in and outside of Japan such as *Akira* (1988), *Serial Experiments: Lain* (1998), and *Neon Genesis Evangelion* (1995) showcased the concept of the apocalypse as being as much about individual psychological and inter-personal conflicts and a metaphor for drastic social changes, as it is about global destruction inspired by a religious text and rampant technology. Whether these texts are physiological, political, sociological, or psychological in nature varies and often contains elements of each. This collective of tragedian narratives can be seen as somewhat anti-climatic.[62] It is also a distinctive way of conveying technological anxiety and mistrust in its influence over society, whether it is the changing structure of families and gender roles, or the nature of communication given new technologies, or the new potentials and threats that exist for the disenfranchised that may benefit from technological development. In which case, the post-apocalyptic world becomes a very convenient stage to explore the emotions of 'dread' and 'desire' regarding the future of society as well as our planet. It is important to keep these fears and anxieties in perspective even in the light of the great social changes these narratives represent which construct technology as the perpetual antagonist.

If we consider Japan specifically, and what sci-fi Anime it was producing when the medium came to fame and infamy outside of Japan (*Lain* (1998), *Evangelion* (1995), and *Ghost in the Shell* (1995)), the question almost has to be asked:

> If pop culture is a reflection of important issues in broader society, what on earth was Japan going through in the '90s'? Quite a lot. The beginning of the last decade of the twentieth century saw the Japanese economic bubble burst… In the year 1995 when *Evangelion* premiered, Japan suffered perhaps its worst year since the surrender, capped by the Aum Shinrikyo cult gassing of the Tokyo subway in March and the Kobe earthquake in September (Drazen, 2004, p. 309).

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[62] The fact that many of them are simply using the apocalyptic vision as a metaphor for societies dealing with changes that seem a threat to the status quo can seem melodramatic in manner, but that is partially the point.

So much of the traumatic transitions in Anime of the 1990s can be seen as reflections of this apocalyptic rationale regarding the country's apparent socio-economic state. Napier notes this as also being tied to the surrender itself and that the two anxieties are intertwined, and that "Japan, shadowed by memories of the atomic bomb and by a more than decade long recession that closed off an era of explosive economic growth may seem an obvious candidate for having visions of the end" (Napier, 2005, p. 250). There is therefore a natural resonance with apocalyptic narrative. The theme however is by no means isolated to Japan. It is worth noting that it is the aforementioned texts that brought Anime to a much heightened sense of awareness and popularity in the U.S., who also had experienced its own apocalyptic paranoia during the Cold War.

That sci-fi Anime features so many characters who endure such high levels of physical and psychological trauma is indicative, one scholar argues, of another nature in Japanese culture, "Tatsumi's optimistic concept of 'creative masochism'" (McCaffery, foreword in, Tatsumi, 2006, p. xviii). This specifically and originally Japanese concept and mentality may also help explain the apocalyptic, esoteric and otherwise fantastic, if not manic-depressive, narratives obsessed with destructive and violent evolution.[63] This gives some cultural context to many of the ambiguities that exist in Anime regarding technology, the dangers and desires of submitting to a great power, and how it may alter or even destroy reality. It may even relate to the desire of destruction itself.

A more common and generalised interpretation over the apocalypse and evolution in Anime however is its view as social criticism.[64] Amongst the list of reasons for the end of the world is "the destruction of traditional and social values, most obviously embodied

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[63] As McCaffery explains it:

> "The masochistic streak runs very deep within Japanese culture and its real sources lay not in the reactions to events following World War II, but in deeper factors ranging from childrearing practices and rigid gender relations, to a sense of nation identity containing several radically opposed components- that is, hyper-inflated egotism and a sense of racial and cultural superiority *and* equally pervasive sense of abjection, cultural inferiority and insecurity- whose irreconcilability lead to maladjustment."(McCaffery, foreword in, Tatsumi, 2006, p. xviii)

[64] This is another reason why sci-fi and other Anime dystopian texts are so relatable to the Book of Revelations. Just as all the 'false' religions and all sinners according to Judeo-Christian cosmology are banished to Hell, similar judgements are applied in Anime to those who misuse technology, which most-often entails a catastrophe on the scale of apocalypse.

by the family" (Napier, 2005, p. 254). In apocalyptic Anime the nuclear family is rarely present, and Napier cites *Akira* (1988)*, Evangelion* (1995) and *Appleseed* (2004) as specific examples, and states the presence of 'group peer bonding' being one of the alternative social units appearing. The apocalypse seems to inevitably be accompanied by the break up of the nuclear family and values that go with it. Which caused which, however is a debate that despite initial implications to the contrary is still very open. Characters in such Anime are often dysfunctional for greater reasons than just social and familial tension. What this all alludes to ultimately is the portrayal of anxiety and unease within society as it experiences transition through the medium of technology and restructuring to accommodate these transitions (or not). What makes this interesting is that Anime suggests that any radical alteration to the family unit is an apocalypse in of itself and that apocalypse is "so often metaphorically expressed in the disintegration or even the transgression of the family" (Napier, 2005, p. 256).

The change of women's status in Japan is quite significant to family transgressions in Anime. Technological transgressions represent a unique threat for women even as it works as a social equalizer. "For women, the problem is usually sexual. They wonder about their appearance, their fertility, and the effect their great strength has on the men they care about" (Levi, 1996, p. 95). The dilemma is remaining what's called "*yasashi* (gentle meek kindly)" (Drazen, 2004, p. 117) in Japan, whilst also being powerful, as seen in *Bubblegum Crisis: Tokyo 2040* (1998).[65] Even the forceful heroine Re-l in *Ergo Proxy* (2006), who largely rejects the 'yasashi' persona, retains some dependency, being at a loss without her autoreiv to comb her hair for example. Although the issue of sexuality is somewhat removed as humans no longer procreate that way, familial tension with her 'grandfather' is also a lesser theme of the series.

Texhnolyze (2003) also embodies the disintegration of the family unit, in so much of its character's experiences with cyberization and familial dysfunction in the extreme become almost symptomatic of each other. In one instance 'texhnolyzation' is seen as an intentional alienation, a means of removing oneself from family or community ties,

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[65] *Elfen Lied* in its graphic portrayal of the 'new' monstrous feminine life form arising to wipe out mankind is clearly an example of this fear of all powerful females and thereby creates a narrative framework that justifies brutality and subjugation of women. This is closely linked to themes in pornographic Anime which Napier mentions.

explained by Toyama: 'They say that acts such as self-injury and mutilation such as getting tattoos signify an attempt to deny one's blood ties. I couldn't have been happier to get texhnolyzed'. This is not without sufficient reason either. Incest is a prominent theme of the series that has already been discussed[66], and it also serves as the epitome of how the traditional concepts of family and community have been broken down. One of the most unsettling examples occurs when Toyama is propositioned for sex by his father in return for information, to which he obliges.

The apocalypse in Anime can be metaphorical for these social changes, or the two themes may be mutually inclusive. In either case such texts are often indicative of the socio-economic climate at the time of its production. That several post-apocalyptic Anime gained popularity in the nineteen nineties outside Japan suggests that not all social concerns contained therein are exclusively Japanese. That technology is changing the way we communicate and relate is undeniable, whether this beneficial or detrimental is a matter of opinion, and the ambiguous apocalypse in Anime is indicative of this.

Apocalyptic Anime, in all its various incarnations represents fears regarding the continued encroachment of technology onto society. Some portrayals seem to explore legitimate challenges that await humanity in the future such as environmental and populations issues. Others confront rampant technological progress, exploring both the innumerable potential located therein, but more often exploring the possibility of a decimated world in which humanity is balanced on a knife-edge between survival and extinction. Anime also dwells a lot on the insatiable aspect of human desire when it regards technological development, suggesting that even the "world with all its secrets revealed is a disappointing one" (Napier, 2005. p. 273). It also addresses what can be seen as a greater underlying human pessimism. "Caught in a post-war world in which the dream of consumer abundance is less and less able to conceal a corrosive emptiness the apocalyptic mode may seem to be the only sure means of escape" (Napier, 2005, p. 274). Despite all this there is the comfortable knowledge that "Earth itself is somewhere around 4.5 billion years old and is expected, unless we do something really stupid, to last another 4 to 5 billion years" (Gresh and Weinberg, 2005, p. 180). Often such apocalyptic aspects

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[66] See Chapter 2: Section 5 - The (Attempted/Unnatural) Rebirth of Humanity

are simply metaphors that belie simple trepidations regarding the changing nature of human relationships with each other, and the increased fluidity of identity, as cyberization, artificial intelligence and bio-technology seep more and more out of science-fiction and into the real world. It is to these technologies specifically that we now turn.

Chapter III: Cyberization and Artificial Intelligence

> I've seen things you people wouldn't believe. Attacked ships on fire off the shoulder of Orion. I watched C-beams glitter in the dark near the Tannhäuser Gate. All those moments will be lost in time, like tears in rain. Time to die. – Roy Batty, *Bladerunner* (1982)

One of the insights gained in this study, has been the recurring presence of Ridley Scott's *Bladerunner* (1982) in so much of the academic and intellectual material on Anime that has so far been produced, both promoting the text as a fundamental and effectively a co-founder, alongside William Gibson's *Neuromancer* (1984), of the cyberpunk subgenre and subsequently its prominent and recurring influence over sci-fi Anime. Oshii's *Ghost in the Shell* (1995)*, Serial Experiments: Lain* (1998)*, Bubblegum Crisis: Tokyo 2040* (1998) and a substantial number of sci-fi Anime in the nineteen eighties and nineties pay at least some homage to the film based on Philip K. Dick's novel *Do Androids Dream of Electric Sheep*? (1968) This is an influence that has not subsided, and much of post-millennial Anime continues to delve into the same issues that fascinated people in *Bladerunner* (1982), whilst evolving the genre with its own unique philosophical markings. This is why it is necessary to look at the defining concepts of cyberpunk; to establish several Anime texts that specifically conjure this subgenre, and establish them as part of a continuum. The archetypal cyberpunk theories are explored here, together with the attitudes they exude which are again reflective of anxieties regarding the destabilization of traditional definitions of the human. Because of these strong continuities, a re-tread through some of the classic Anime titles such as *Serial Experiments: Lain* (1998) is necessary. The transition of the Ghost in Shell franchise into the post-millennial era is the most important example of how sci-fi Anime has enacted and built upon cyberpunk's exploration of post-human concepts of identity, memory, and the soul. This leads to the diversification of the genre into post-cyberpunk, retro-sci-fi and other affiliates that incorporate greater levels of surrealism and fantasy which the key texts exhibit.

However before undertaking analysis of the larger workings of the subgenre and its presence in Anime, another brief linguistic explanation may be useful for

understanding the basics of what cyberpunk 'is' and 'means'. Dani Cavallaro gives the best description I have found:

> [T]he cyber- in cyberpunk refers to science and, in particular, to the revolutionary redefinition of the relationship between humans and machines brought about by the science of cybernetics. … the punk element refers to a rebellious attitude rooted in urban subculture. Cyberpunk's characters are people on the fringe of society: outsiders, misfits and psychopaths struggling for survival on a garbage strewn planet … punk is used as a metaphor for rootlessness, alienation and cultural dislocation[67] (Cavallaro, 2006, p. 166).

Such attempts to undermine the system by the protagonists of such narrative alone are almost always unsuccessful (except in categorizing them as criminals). Cyberpunk is primarily concerned with the technology of cybernetics and how it defines the contours of its society. The actual word "Cybernetics takes its name from the Greek word for "helmsman"" (Gresh and Weinberg, 2005, p. 91).[68] It is this technology that allows for the creation of the digital space, in Anime it is attributed several names; the Net and the Wired to name just two. It is an alternative reality known also as Cyberspace, and it "is created by transferring a data matrix into a landscape in which narratives can happen"[69] (N. K. Hayles, cited in Cavallaro, 2006, p. 164). It is herein that two new hybrids of life are to be found and they are the icons that define cyberpunk and form the crux of its narrative; collectively they can be referred to as the 'cybernetic organism.' The first entity is the cyborg; the "term has tended to describe primarily a human being whose body has been taken over wholly or partially -and usually for the purpose of enhancing the organism's natural abilities- by electromechanical devices" (Cavallaro, 2006, p. 166). The second is the artificially intelligent entity that is created either accidentally or intentionally by humanity, most often through the development of increasingly advanced

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[67] In other words, the 'cyber' denotes the environment, the ever-present dystopia of rampant technology, whilst the 'punk' refers to its denizens, the aforementioned cowboys, immersed in the many technologies at their disposal but forced into a lifestyle of squalor due to the hyper-capitalist corporate hierarchy that orders such a society.

[68] So cybernetics can be seen as an attempt to control the direction in which humanity is progressing.

[69] Indeed it is the arena where pivotal events of cyberpunk occur and where the crucial human concepts of reality and identity are confronted and threatened. That the passage to cyberspace is through the direct connection of the organic synapses to electronic media is one of the core technological anxieties inspiring the sci-fi dystopia. "One of the most important themes of such stories is the direct connection between human minds and computer systems" (Gresh and Weinberg, 2005, pp. 143-144).

computers specifically designed to process and store large amounts of electronic information. It may possess a body, in the case of androids and intelligent robots, or it may reside in the transient electronic data stream of either a computer network or cyberspace, or both. Both of these new manifestations of life represent a destabilisation of several inherent concepts that make up traditional human identity, revitalising ancient debates on definition of the terms 'human', 'life' 'soul' and even 'god'. In Anime, it is the Ghost in the Shell franchise that continues to indulge itself the most in these concepts as a whole, and ask some of the most interesting questions regarding their definitions, beginning with Masamune's original manga and Oshii's 1995 film. Like *Bladerunner* (1982) and perhaps even more akin to *Neuromancer* (1984), "The anime and the manga both dealt with the near future on earth and what it means to be human in a world filled with artificial intelligence, intelligent machines and cyborgs" (Gresh and Weinberg, 2005, p. 140). This has continued with Oshii's sequel *Ghost in the Shell 2: Innocence* (2004) and another adaptation of Masamune's manga, the two season television series *Ghost in the Shell: Stand Alone Complex* (2002) which exists in an independent universe to Oshii's works but also "has deep roots in modern science fiction as well as anime and manga" (Gresh and Weinberg, 2005, p. 140). Dystopic atmosphere and technologic ambiguity still infuse cyberpunk, in what Napier citing Staiger describes as ""future noir", in which dimly lit labyrinthine cityscapes dominate the mise-en-scéne" (Napier, 2007, p. 108).

Yet despite the illusory and darkly imaginative décor that inhabits it, cyberpunk differs most significantly from much of science fiction in that it is attempting to conjure a near-future, a time/space that is more relevant to the now, that functions at least partially as a mirror of society, via technologies already or soon to be present. Cyberpunk has consistently represented itself as a hypothesis of potential technological application and an indicator of societal trends should such technology continue to be developed. Strikingly, in at least several ways, our current era exists as a cyberpunk world. Cyberspace has become a facet of everyday life, and the concept of the surveillance society has been put to full use; both of which have experienced the controversy foreseen in the fiction that critiqued them. "In the wake of cyber culture, multiculturalism, and post-colonialism in the 1980's, we cannot help but notice the tremendous impact of

hyper-reality" (Tatsumi, 2006, p. 9). Thus cyberpunk is representative of various groups, organisations and individuals. A popular trend has been to reduce the various groups into Transhumanists and neo or bioLuddites, of which the revival of traditional religion has added an intriguing facet in the debates over technological development in the areas of communication and surveillance, energy production, military weaponry, and most visibly in recent years; biotechnology. This dualistic view creates a convenient pros and cons structuring of the various arguments which several academics have indicated their resentment of, and admittedly fails to capture the full scope of the arguments, leaving two seemingly extremist and ideologically opposed camps. James Hughes is a perfect example of stoic positivism in regard to all areas of technology; an outlook cyberpunk aesthetically contradicts.[70] Hughes provides the Transhumanist view of technology and how it offends his opposition, the 'bioLuddites':

> Today the "abominations" enraging the bioLuddites are lives that blur the ancient cognitive categories that separate animals and humans, humans and machines, the living and the dead, the real and the artificial, men and women, the young and old (Hughes, 2004, pp. 76-77).

And for that matter so does Cavallaro:

> [C]entral to research in the field of cybernetics is the notion of the body as an electronic system: a communications network capable of absorbing information through the senses and of subsequently acting upon the information received. Concurrently, while the human body is conceived of as a machine, it is also considered viable to design machines which simulate the human organism. … The virtual interchangeability of human bodies and machines is a recurring theme in cyberpunk and is specifically intrinsic to its representation of the cyborg (Cavallaro, 2006, p. 166).

Cyberpunk Anime today has evolved to embrace the many different attitudes and schools of thought that have sprung up regarding these various forms of technology. The discourse it puts forward most prominently is that it is not technology itself that poses the biggest threat to human existence, but the irresolveability of the conflicts between the multitudes of different organised factions with their contradicting ideologies and

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[70] In fact such positivism has been absent as a dominant outlook in sci-fi for many decades now.

arguments. This is a key aspect of the 'post'-cyberpunk evolution of the subgenre. Where cyberpunk was concerned with those immersed in the cyberized worlds, post-cyberpunk centres on those who have created or inherited these worlds, and how they interpret this responsibility. Napier mentions *Ghost in the Shell 2: Innocence* (2004) specifically and the surreal psychological contrast to the first *Ghost in the Shell* (1995).[71] The surreal nature of post-cyberpunk in some ways only serves to make the questions of reality, identity, memory, humanity and deity seem all the more poignant, yet contain a sense of dread fundamentalists can relate to, notions of which *Texhnolyze* (2003)*, Wolf's Rain* (2004) and *Ergo Proxy* (2006) all pertain to as well.

In defining the socio-political outlook of post-cyberpunk, it is important to consider "the decline of the two Cold War empires, the expansion of the information society, and other complex circumstances that go together to make up what is often described as 'post-modernity'"[72] (Bird, 2008, p. 144). While cyberpunk placed an emphasis on the rise of Asian nations in the future as embodiments of the techno-society, post-cyberpunk has shifted to a more Westernized and perhaps even Occidentalist setting, explicitly detailing the further decline of post-apocalyptic Anglo-Saxon styled societies epitomised by the isolated Domes that are physically and metaphorically decaying in *Wolf's Rain* (2004) and *Ergo Proxy* (2006), as well as in the subterranean Lukuss in *Texhnolyze* (2003).[73] Even the Ghost in the Shell franchise, with its 'local' setting of Japan, has a global attitude to concerns that affect all modernised nations. It too contains aspects of what has also been described as the 'failed secular utopia'. The main cause of this failure in cyberpunk and its descendents is the co-dependent concepts that are perceived as driving Western society; capitalism, commodification and consumerism.

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[71] Other aspects are also changing in Anime, such as the shift of mecha to the background of emotional affectivity. Now more than ever they seem a neutral tool and purely aesthetic entity in counterpoint to intense emotional struggles between traditional humans and the various 'other's and most importantly those who exist within the hybridity of both.

[72] Original cyberpunk included a lot of Oriental setting and influence, particularly Japan and as such it makes a lot of sense for Anime to carry on the progression of the genre.

[73] As cyberpunk tended to 'fetishize' Asia, it is now Victorian and other classical periods of European fashion and architecture that post-cyberpunk has tended acknowledge as the inspiration for its post-modern décor. These represent not just the perceived failings of the socio-economic belief systems of Western civilization but also of its theorists, philosophers, and theology which *Ergo Proxy* particularly continually alludes to.

In sci-fi Anime this is often interpreted as technological dependence which is evident in cyberpunk, of which one of the oldest is prosthetics.[74] *Texhnolyze* (2003) identifies such technological consumption as an activity of the elite, for those who can afford prosthetics after brutal and common dismemberments that occur in Lukuss. As Gresh and Weinberg outline: "In *Texhnolyze*, those in power are the ones strong enough to remove the limbs from their enemies. Cybernetic replacements are devised using a mysterious technology known as Texhnolyze, which attaches the central nervous system to the prosthetic devices. This idea is based on actual technology" (Gresh and Weinberg, 2005, p. 67). It is this willing slavery that is both condoned and abhorred in such texts, deemed a necessity for keeping the populations docile and ordered, but also ultimately unfulfilling and soulless. This leads to the innumerable crises endured by the denizens of Lukuss, Romdo and Free City, not to mention the conflicts between the confused beings of each universe as they fail to co-exist. The disposable nature of consumerism and rapid encroachment of technology on the human body in post-cyberpunk becomes the instigator of anxiety and multitudinous possibility. In Hughes' words: "Soon unlimited technological control over the human body and mind will be possible and the battle over how much of that control individuals should be allowed will dwarf the fights over drugs and prostitution" (Hughes, 2004, p. 11).

3.1 The Cyborg; Mechanization of the Body, Digitization of the Brain

Cyberization represents a very literal invasion of cybernetics on the body. In Anime it assimilates many of the elements of both external components, such as mecha and prosthetics, as well as internal augmentations such as cyberbrains and combines the potential and repulsive qualities of each. Both also adhere to similar aesthetics and themes of consumerism, and can be equated with control of the body by external forces. A human with any form of prosthetics or implants can technically be termed a cyborg, but up to a point cyberization still allows for a person to maintain its sense of being 'human', albeit with some adjusting. But at a certain point this definition becomes

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[74] The society of *Ghost in the Shell: Stand Alone Complex* is one example of this, with its rapid hyper-consumption of cybernetic prosthetics and subsequent deconstructing of humanity also has an evident reflection in the superficial society of Romdo in *Ergo Proxy* where consumption is the only means left to the citizens to gain self-importance as even the control and process of their procreation has been denied to them.

destabilized and eventually becomes the 'cyborg' in the sense that the subject has become so heavily modified that he/she is no longer human but a new entity entirely. The point at which this transition occurs is one of the defining concerns of cyberpunk Anime, but one argument might be the point at which the brain itself undergoes cyberization, which Cavallaro attests to: "The cyberbrain results from the implantation of exceptionally sophisticated electronic mechanisms directly into a person's cerebrum, as a result of which, information processing power and mnemonic capacities are exponentially enhanced" (Cavallaro, 2006, p. 216). This would mean the brain itself is now advancing alongside digital technologies and the two are compatible. In cyberpunk, this allows access to cyberspace, an alternate mode of reality and experience. Ruh also states that the "concept of the cyborg as a radical method to find freedom from domination is one that resonates throughout (Oshii's) *Ghost in the Shell*" (Ruh, 2004, p. 138).

However, as mentioned, there are some rebuttals to this dualist interpretation of humanity's interaction with cybernetics as a progression from one state towards the other, and that technology is simply one aspect of reality in which humanity is co-defined. Taylor is particularly critical of such dualism: "We are always already posthuman. …The human is never separate and closed in on itself, but is always implicated in open systems and structures that expose it to dimensions of alterity that disrupt stability and displace identity" (Taylor, 2008, p. 3). Taylor is suggesting that humanity is part of a co-dependent and co-defining collective; that the perceived Other is already, and has always been, involved with the changing creature that is the human. He further states that "[t]he interplay of nature, society, culture and technology forms the shifty matrix within which reality as we know it is constituted"[75] (Taylor, 2008, p. 4). This gives credibility to the argument that all the changes taking place and the fears science and technology instigate are actually evolutionary constants. So scientific technological endeavour may be slowed if collective human desire forces it to, but it cannot be separated; it is us, we made it, we produced it, if defines us, we define it.

Post-cyberpunk often represents the mentality in its narrative whereby "selfhood is predicated on a carefully maintained distinction between the outside (of a person) and

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[75] Much of post-cyberpunk deals with this kind of multiplicity, but rather than rendering it as a balanced coalition of forces, more often it appears as quagmire of mismatched and intrinsically antithetical regimes of thought engaged in bloody conflict.

the inside" (Orbaugh, 2008, p. 152). Thus the body of a human being is both the structure that defines it and the barrier that separates if from the other.[76] Taylor's concept of this duality is that it is essentially an illusory state of mind and that humanity, knowingly or not, is part of a network. That being said humans still insist on autonomy, and Orbaugh's alternative theory is that the "boundaries of the of the body act as gatekeepers for the movement of *information*… but these boundaries are not physically violated in the process" (Orbaugh, 2008, p. 152). So sense of self is preserved in this case. But if the body is removed or broken down, or the mind fragments or amalgamates as with the collective consciousness that is associated with evolution and the net in some Anime, then this presents a threat to the boundaries and the structure of the self, creating an identity crises also all to common to Anime. It is the possibility of humans and persons existing without these boundaries and whether those terms can even maintain relevant meaning, which ensures such anxiety, and to compare it to the fear of death is not altogether an exaggeration.

Orbaugh suggests that *Ghost in the Shell 2: Innocence* (2004) is an archetypal example of this anxiety: "If we include the absent Kusanagi, now presumably a completely disembodied, cybernetic lifeform, we see in *Innocence* a wide range of post-human entities" (Orbaugh, 2008, p. 154). So this includes those even beyond cyborg, the mechanical cybernetic manifestation of humanity and explores the immaterial realms in which we might one day have the option to fully reside. It also explores the concepts of autonomy and independence that exist in either realm and pulls at the illusory fabric of such belief structures, to which Orbaugh further points out: "The "inside" we imagine as being produced by our *human* subjectivity and affect are, in fact, inhabited by millions of nonhuman creatures. Although most of us tend to repress this knowledge and, when that fails, to view it as terrifying, narratives such as *Innocence* can remind us that our physical permeability too is at times actually beneficial" (Orbaugh, 2008, pp. 167-168).

Both Taylor and Orbaugh both seem to suggest a notion of futility in regarding the concepts of autonomy and separation which are threatened by the mechanization of the body and the digitization of the brain. Both body and mind in their scope of thought

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[76] In *Evangelion* this theory is also applied in the spiritual sense, in the form of the AT (Absolute Terror) field.

are subject to more systems of influence than even cyberpunk and Anime dare to anticipate. Orbaugh describes that such illusions of independence occur because "[t]he valorization of cognition leads to an idea of the self-containment of the subject: the brain as the location of cognition, is seen as the autonomous sole origin of self-hood" (Orbaugh, 2008, p. 166). The brain becomes the Throne of the Soul within the kingdom of the self, as *Evangelion* (1995) might describe it, but "bodies are equally far from being autonomous, as in the genetic determinist model- rather, they interact with one another" (Orbaugh, 2008, p. 166). This is to say that so much of our behaviour and responses can be put down to genetic programming and socialising. So in the case of *Innocence* (2004), Orbaugh states: "Oshii is playing to contemporary human fears about our seemingly inexorable march into a posthuman condition marked by the loss of stable boundaries" (Orbaugh, 2008, p. 167).

Anime and cyberpunk address these theoretical concerns of how the traditional definition of human is being subverted by cybernetics by both offering alternate and fluid states of being that is the potential of such technology, as well as dismissing the separate autonomous concept that belies such a definition. Humanity has always been involved in varying systems of influence and the cyborg is simply an additional sphere. In this way (post)cyberpunk in a very personal as well as collective sense, deals with issues such as limb and organ replacement and enhancement and what reliance on these technologies could mean in the long term. The value of this addition as such remains ambiguous as it offers means for both freedom and control of individuals, both strengths and vulnerabilities. The advent of seemingly limitless yet illusory digital worlds only makes this more apparent.

3.2 Duplicity of Identity and the Fragility of Memory in the Digital Age

This leads to the dream-like quality cyberspace often pertains to in cyberpunk. Although, whether the ideals cyberpunk places in this ambiguous space are any different from the idealism of the industrial revolution, or any another utopia yet to be undermined, remains an ominous question. It is entirely possible cyberspace could simply be another facet of the 'shifty matrix of reality' with allusions to dreaming, which Ruh also points out in Oshii's films: "Although dreams are a trope he employs frequently, Oshii has stated that

he is more interested in showing how dreams help to shape reality than in trying to distinguish between the two" (Ruh, 2004, p. 8). Brown refers to one character in particular in Ohsii's *Ghost in the Shell 2: Innocence* (2004) which imbues the film with a sense of human transience: "'Humans,' argues Kim, 'are nothing but the thread from which the dream of life is woven'" (Brown, 2008, p. 226). The character compares humans with dolls and animals, a collage of symbolism which is pivotal to the film, and expresses much disdain for human attempts at transcendence, despite his own disembodied state of being:

> In this age, the twin technologies of robots and electronic neurology resurrected the eighteenth century theory of man as a machine. And now that computers have enabled externalised memory, humans pursued self mechanization aggressively to expand the limits of their own functionality. Determined to leave behind Darwinian natural selection, this human determination to beat evolutionary odds also reveals the very quest for perfection that gave its birth. The mirage of life equipped with perfect hardware engendered this nightmare (Brown, 2008, p. 233).

Still the question remains, where such ego actually resides, what is the definition of self-hood? Orbaugh suggests that "since memory can be fabricated and transferred, it cannot function as the foundation for self-hood. Nor can the body, since it is in the process of disappearing" (Orbaugh, 2008, p. 160). Oshii himself suggests that what is left is 'omoi'- thought/feeling/ emotion/affect. This is another more encapsulating translation, which is inherent in Kusanagi, who Obraugh states "*stands* for the inauthenticity of the body/shell, and it is therefore not surprising that she exhibits no affective connection with or through it" (Orbaugh, 2008, p. 162). The role of memory is important to this technological dislocation. If our memories were to be stored on a hard drive, that is, if our memories became delete-able, and conversely edited and even formulated, what becomes of experience and its role in personality? If we control experience, that is, copy/paste/edit our memories and other people's, what is our responsibility, or would this ability simply be a fulfilment of hedonistic desire over one's self and desire for power over others? One of the more disturbing concepts that is put forward in *Serial Experiments: Lain* (1998) for example regarding memory is described by Napier: "Lain is told- and this is meant to be a comfort –that "if you don't remember something, it never happened … you just need to

rewrite the record'"" (Napier, 2007, p. 118). Napier however tries to amend and produce a counterpoint to this flippant convenience and happiness based view of memory: "The erasure of memory is seen here ironically as comforting, a way to rewrite an unhappy history- much as Japanese textbooks have erased certain episodes from the Pacific War – but underneath the irony is a tragedy of a child's non-existence" (Napier, 2007, p. 118).

It is this duplicity of identity through the fragility of memory in the digital that is the ultimate destabilizer of individual identity which sci-fi Anime both literally and metaphorically alludes to. Indeed it is the most dystopic aspect of the cyberpunk subgenre; Napier captures the essence of it thus:

> [I]n both *Lain* and *Evangelion* memory itself ultimately becomes uncertain, a force to be manipulated and even perhaps, abused. … In fact the speed of fragmentation and loss may be the most distinctive aspect of the postmodern situation leading to a pervasive sense of helplessness and fear (Napier, 2007, p. 107).

Evangelion (1995) and *Lain* (1998) use mecha and the Wired respectively, in a similar fashion to how the Ghost in the Shell universes use the Net[77]. Mecha, cyborgs and human bodies in such an outlook become no more than vessels[78]. And yet these superficial, fragile entities do not even begin to grapple with the issue of AI relations. What will we really do if and when the machines start asking questions and talking back?

3.3 The Advent of AI: Human/AI Relations and Robot Rights
In sci-fi the populace usually panics at the prospect of AI. In the subgenre of cyberpunk AI is seen as useful to a degree but if control of it is ever lost it is methodically put down or at least such an attempt is made. Gresh and Weinberg ironically point out however that "by definition, artificial intelligence (AI) has to do with the ability of computers to think independently. Of course, the concept revolves around the basic question of how we define intelligence. And that's also the focus in Anime series that question why robots

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[77] The humans minds merging with the EVAs and ultimately with each other through the Human Instrumentality Project in *Evangelion* and the transferring of human cognition to the Net in *Ghost in the Shell* both pertain to a broader but abstracted view of reality that is so disturbing.
[78] In the solipsistic world of Evangelion, mecha are finally unimportant except as a means to know the self. Even the human body is less important than the mind that creates its own realty." (Napier, p.102)

can't be and therefore what humans essentially *are*" (Gresh and Weinberg, 2005, pp. 73-74). This is also directly linked to the reasons so much resentment is hurled upon such entities in sci-fi, which often only serves to point out that the machines have the potential to be more empathetic than humans themselves. Gresh and Weinberg state for example: "If *Metropolis* is saying anything about robots, it's that they have the potential to be more humane than humans; it is also saying that human leaders are heartless warmongers"[79] (Gresh and Weinberg, 2005, p. 65). A lot of such resentment can thus be framed as racist sentiment, and occurs in a similar fashion to the ending of slavery in America. The actual word 'robot' has origins in the concept of 'labour'. A "Czech playwright Karel Capek coined the word *robot* to refer to the forced labour of serfs, the czechslovak word for "work" happens to be *robota*" (Gresh and Weinberg, 2005, p. 36). The pop-culture image of the android combined this concept with attempts to define intelligence. Gresh and Weinberg state that "[e]arly artificial intelligence attempted to reduce our thought process to purely logical steps and then encode them for use in a computer" (Gresh and Weinberg, 2005, p. 92). This may be part of the explanation offered by Anime as to why people resent intelligent machines, not because they are mechanical yet logical as it were, but because this oft-portrayed cold emotionless logic is based on our own thought patterns. To some it is unsettling, realising that the way we think is a decodable and predictable series of zeroes and ones[80]. And yet this is one of two main theories on how AI might function logically, called the Top-down approach; there is also the Bottom-up approach and they represent two very different renditions of AI seen in sci-fi and Anime, and each have their dilemmas as Gresh and Weinberg describe:

> The problem with the top-down approach is that it requires an enormous database to store all the possible yes-no facts a computer would have to consider during deduction. It would take an extremely long time to search that database and would take an extremely long time to arrive at conclusions. … This is not at all the way humans think. An astonishing number of thoughts blaze through the human brain all at the same time. In computer lingo our brains are massive parallel processors. … [T]op down AI converts human

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[79] Consider Maeda's *Second Renaissance* where all violence conducted by machines is taught by and is a direct result of humans and their desire for subjugation and eventual fear and hatred directed at the androids which leads to a 'final solution' policy enacted against the machine.
[80] This is the 'Binary Theory' of intelligence which will be addressed later.

behaviour and thought patterns into computer symbols and instruction (Gresh and Weinberg, 2005, pp. 94-95).

And there are some aspects of human thought, basic emotional states and desires, which Gresh and Weinberg suggest might be impossible to encode into an electronic device, such as "Love, passion, greed, anger: how do you code these into if-then statements" (Gresh and Weinberg, 2005, p. 95). This is where Bottom-up software becomes quite useful, because it only gives the AI a few basic ground rules for thought processes and interactions, but the rest of its intelligence has to be made up as it goes along gathering experiences and learning from others, which is seen as a much more accurate process of how humans learn and develop intellectually, even if it is slower. So according to Gresh and Weinberg's "definitions of top-down and bottom-up AI, it makes sense to conclude that most anime robots who are artificially intelligent possess bottom-up software"[81] (Gresh and Weinberg, 2005, p. 97). A post-modern example of this would be Pino, the autoreiv girl-child who appears *Ergo Proxy* (2006), who is affected with Cogito Virus and throughout the series slowly develops her personal identity and her raison d'être. Compare this to many American sci-fi androids such as the Terminator, with its very rigid structured logics, as befits a strategic war-machine. Or compare it to Isaac Asimov's strict three laws of robotics, where again, intelligence is based on pre-programmed and infallible laws. Although this could be read as an oversimplification of cultural attitudes, especially if we consider portrayals of top-down AI in both American and Japanese media; both the Terminators and the Boomers from *Bubblegum Crisis: Tokyo 2040* (1998) are monsters in quite a traditional sense of the word.

All of these supposedly monstrous machines however all began their existence as servants and tools in a state of utter subservience. In cyberpunk and sci-fi in general they fulfil the role of personal assistant, a machine for labour and military purposes. The most advanced of these, usually represented as humanoid androids could even combine these roles and even serve as physical, emotional and even sexual companions. This is the role they serve in *Ergo Proxy* (2006), as can be seen in Re-l's autoreiv, Iggy, who

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[81] This is interesting as it presents a different popular perspective of robots/androids in Japanese than in most American media. In Japan, robots like Astro Boy have a small amount of intelligence, but have to develop personality and logic as they go.

accompanies her at work, chats with her about her romantic prospects and even goes shopping with her and combs her hair. All autoreivs fulfil similar roles for their masters. Android companions are a well-established staple of sci-fi and the same goes for Anime, as Gresh and Weinberg will attest:[82] "*Bubblegum* adds a new twist in the robot-mecha subgenre in that it introduces the idea of using robots for slave labour and sex. It's theme of artificial life asks the now old question: What does it mean to be human if you evolved artificially" (Gresh and Weinberg, 2005, p. 61)? It is an old question but one that's still very much in circulation. Androids as sex slaves are still visible as well in Anime, such as Oshii's *Ghost in the Shell 2: Innocence* (2004), where human souls have been digitized (referred to as ghost-dubbing in the film) and placed in androids built for sexual companionship with disastrous results. Such a role is seen as dehumanizing even for a robot, whose very image is chosen for them and drawn from the depths of sexual fantasy, mostly male, and as such Gynoids are most female in form. Ultimately Tatsumi states, such "Ideal women are the product of men's dreams, and dolls are imitations, not of women but of that product" (Tatsumi, 2006, p. 97). They serve as an apt symbol of subjugation in cyberpunk.

Artificial origin has close associations with the concept of digital memory, and Anime often deals with issues arising from the possession of such malleable memory, and the problems this causes for an AI's sense of self. Gresh and Weinberg consider the Android character from *Chobits (2002)*; Chi, and consider the question of whether flawed memory is reason enough to discount the presence of intelligence. "If a computer's memories are deleted, meaning that her memories aren't really her own, then can she be considered a person? Our answer: sure, because people forget things all the time … Does this lack of memory make us less human" (Gresh and Weinberg, 2005 p. 102)? There is also more to this argument than just the requisite of memory to personhood. The failure of memory is part of a natural process of decay, people do not forget willingly (most of the time). So if we accept the fact that flawed memory is part of our definition of humanity, this would not only implicate androids under such a definition, but suggests

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[82] In the Anime *Roujin-Z* from nineteen ninety one, "Mr Takazawa's bed happens to be artificially intelligent. It bathes the senior citizen, talks to him, entertains him, and basically takes care of his every need by linking directly to his brain" (Gresh and Weinberg, 2005, pp. 89-90). This is the role that is initially perceived for much of androids and robots, as loyal and convenient servants.

that an entity, human or android, that possessed perfect memory through technological means could be defined as something more than human. The same could be said for those who have the power to edit and delete others memories at their whim, an unsettling prospect which much of cyber-punk and Anime explore, and whether such an act is criminal, that is, could the editing or deletion of a person's memories ever be regarded on the same tier as murder or suicide? If the means became available for people to edit memories as they pleased, download any experience, such as is seen in *The Matrix* (1999), would that entail the point of deification for humanity, or just the point that individual experience and unique perception become obsolete?[83]

Whether memory can be perfected or whether it remains flawed does not prevent either sentience, human or artificial, from philosophical musings on both the self and universe. And this becomes the real arena where AI gets to prove itself as a cognitive and inquisitive entity. According to Hughes anyway, with such amounts of "information complexity in the world we can be sure that some very interesting will begin to emerge without any conscious human design at all. There will be ghosts in the machines" (Hughes, 2004, p. 5). And indeed this is one of the key theories of cyberpunk. One apt example is the Tachikoma think-tanks from *Ghost in the Shell: Stand Alone Complex* (2002), and the amusing but in depth conversations they have with each other about the nature of their identities (given they possess synchronised collective memory), their role in Section 9 (the elite paramilitary unit they are attached to) and most importantly their attempts to link intelligence and data with the indefinable soul. Much of this takes place in episode fifteen which is devoted to the Tachikomas philosophising. The theory they come up with is a binary one, which is logical given that binary code is the key means of encoding electronic data. A Tachikoma describe the theory thus:

> It's a concept similar to zero in mathematics. In other words it's a symbol that denies the absence of meaning, the meaning that's necessitated by the delineation of one system from another. In analogue that's God. In digital it's zero. Whattaya think? What I'm getting at is this: the basis of our design and construction is digital right? So for the time being regardless of how much data we accumulate, none of us will have a ghost. But for analogue based

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[83] This is the goal of the unification of the human spirit that is portrayed through the Human Instrumentality Project in *Evangelion*, and hinted at in the potentials of the net in *Ghost in the Shell*.

people like you Mr. Batou, no matter how many digital components you add on through cyberization and prosthetics your ghost will never diminish. Plus because you a have ghost, you can even die. You're so lucky! Tell me, what's it like to have a ghost?

In other words, the concept of 1 can be thought of as data, and 0 is the ghost, or perhaps even more simply, cognition. Humans possess 0 and create and accumulate 1s. But artificial intelligence is contrived of 1s, so what the Tachikoma is actually wondering about, is whether enough 1s or data can be pooled into a single AI to form a ghost/soul or cognition/sentience. This relates their perception of the world as a binary between digital and analogue states. When asked about this by one of its fellow Tachikomas, another responds that in the *Stand Alone Complex* (2002) universe:

> The days of an exact match in the number of physical bodies and ghosts existing concurrently are over. To take an extreme theoretical example: It's not beyond the realm of possibility that a mass of data with no body could carry a ghost.

The Tachikomas have already established themselves as cognitive entities through this dialogue, so the question now becomes as to whether the think-tanks in their current state of cognition possess a collective pool of knowledge and experience i.e.: datat/1s to reach a critical mass whereby a ghost or soul is acquired. Here we hit the usual Anime ambiguity wall but with some interesting dialogue and exchange of ideas regarding what 'alive' actually means:

> By coming into regular and increasing contact with robots, the image humans typically have of life is subconsciously altering. I believe that humans are the ones who are changing not robots.

So the argument changes again to suggest that human associations of the concept of 'life' are changing to accommodate the unique type of sentience possessed by the AI in this case. The greater complexity and cognition of the Tachikomas thinking processes becomes irrelevant to humanity's ability and desire to accept them as equal life-forms. Of which of course there is some resistance in their society to this concept, as there is in ours. One of the Tachikomas bemoans this as a 'kind of warped Luddite mentality', but

another later tries to explain by using a character Togusa's lack of affinity for machines being due to the fact he is the least cyberized of the agents from section 9 and more importantly:

> 'Maybe the reason Togusa has no affection for machines, is because he has a son that shares his gene pool.'

This implies that the actual image of the human, and that genealogy and genetics are a large part of humanity's identity as both individual and collective, and represents the wall that exists for many in sympathizing with the Other, especially the machine. But the wall is being consistently broken down, and what some see as a forced transition of the machine into the realms of the human becomes very unsettling for those who hold true to the traditional definitions of 'life', 'human' and 'soul', which is also mused over by the Tachikomas:

> On the contrary, the crux of the problem is that we're too close to being human. It's because the line that separates human from robot has already been reduced to minor differences in the physical body. Stop for a moment and ask yourselves why our own bodies without organs aren't created in the human image?
> Efficiency as weapons perhaps?
> That's part of it, but the main reason is this: If we were humanoid our users would overemphasize with us on a strange level. As a result we'd probably be hated on an even broader scale.

It also has close links with Tatsumi's theory of the Overlord in narrative, the superior intellect and inferior status, and to have a weapon such as the Tachikomas begin thinking for themselves (as remarkable as it is) becomes a threat to Section 9 that cannot be ignored. The way Tatsumi describes his concept of the Overlord is an interesting perspective on AI status in sci-fi society:

> Overlords, such figures serve as medium or midwife to the future super evolution of human beings and possess stupendous intellectual powers, but their cosmological status is not necessarily higher that that of human beings.

In short- and this is the key point –they possess superior intelligence and inferior status"[84] (Tatsumi, 2006 pp. 56-57).

To give this a context to Anime, the status of 'Overlords' that the machines eventually attain over humanity in *The Second Renaissance* (2003), or the god-like Proxies of *Ergo Proxy* (2006), or even the doomed Angels and their progenitor Adam in *Evangelion* (1995), would be examples. This may suggest that in a very human fashion, people desire the power of gods but not the responsibility. In both American and Japanese sci-fi there is a prevalent trend that sees humans fobbing the logistics and technical sides of its projects to subordinates, both other humans and artificial software and hardware. This is often the narrative process of how the AI becomes intellectually superior and with its superior intellect inevitably asks why it should take orders from less intelligent creatures. One might put it down to cynicism, but this little theory might well explain why the worlds of post-apocalyptic Anime so often unravel themselves into destruction in what can otherwise be seen as overactive imaginations that pervade such narrative.

It is this fear of the loss of control over these artificial creations that is the origin of anxiety and hatred borne towards AI, and even technological progression in general. Napier states that in Anime "[p]ure mecha usually equals pure menace" (Napier, 2005, p. 95). This is the belief that if control is ever lost over robotics, that the machines will violently strike out and become impossible to bring back under control without catastrophic human casualties.[85] This is part of why much AI individuality and personhood in Anime and other sci-fi narratives result in violent conflict and has become such a quintessential aspect of the genre. One consistent impression that comes across is that humanity is neither mature nor responsible enough to serve as parents for artificial entities that require guidance and affection. As such entities are so often born under labour-intensive hyper-capitalist regimes; the only way for such new life-forms to express themselves is through bloody revolution. But the question remains, what would humanity owe to an artificial sentient being, the same application of physical and

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[84] The examples Tatsumi gives are the monoliths in the *2001, 2010* and *2061 Odysseys*, as totalitarian guardians.
[85] This is the primal fear that instigated the Nazi-style annihilation of all androids in Maeda's *Second Renaissance* that ultimately led to the war against the machines in the *Matrix* universe. As the oppressed, it is the machines who often are regarded with the most sympathy, fighting simply for the right to exist, for acknowledgement as a living entity.

emotional resources that a parent puts into raising a child? Cyberpunk, Anime included, does not ever recognise its corporate conglomerate governments possessing anything resembling such kinds of social responsibility. Some real-world groups employ a similar kind of pragmatic racism, campaigning under the belief non-human citizens would disrupt all former definitions of 'human' rights, which Hughes describes.

> The most important disagreement between bio-Luddites and transhumanists is over who we should grant citizenship, with all its rights and protections. Bio-Luddites advocate "human racism", that citizenship and rights have something to do with simply having a human genome. Transhumanists along with most bioethicists and the Western democratic tradition itself believe citizenship should be based on "personhood", having feelings and consciousness (Hughes, 2004, p. 75).

Anime in its application of such theories may be far removed from reality, but it does create a space in which to consider, beyond bloody conflict, how humans and non-humans might interact, and how, if humanity does actually accidentally or actually decide to create artificial sentience, how it is going to teach this entity and create a space for it within human civilization. The most intriguing notion of such a relationship and perhaps the most important aspect of it in cyberpunk Anime is how love might be involved in such relationships. A point about love is mentioned in regard to *Ghost in the Shell 2: Innocence* (2004) by Orbaugh: "is love possible only for humans, or are emotions and affect also possible in artificial beings? Oshii's film suggests that the emotion that remains in a cyborg or android context are precisely what will keep us "human" even after our bodies have become mostly or entirely artificial" (Orbaugh, 2008, p. 150). Orbaugh cites *L'Eve Future* (Future Eve) as providing both an 'epigraph' and a 'source text' for Oshii's film *Innocence*.[86] Orbaugh's suggests there is "the possibility of creating a being who, although entirely artificial, nonetheless can possess a sense of self and can

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[86] The book was written in eighteen eighty six and though it may provide source material for *Innocence*, from Orbaugh's description it appears that the story is more to do with the inventor and his reasoning behind creating essentially a mimicry of life, as opposed to *Innocence* which is concerned more with the artificial life itself, pursuing the horror an tragedy of its creation and the human lives ended and affected by creations whilst building upon the overlapping themes of Gods and Dolls and the roles of each. *Future Eve*, from its description is primarily about "a fictionalized Thomas Alva Edison" (Orbaugh, 2008, p. 151) convincing his friend and patron to adopt his creation, his 'andreid', from which English derives the modern 'android', as his lover and replacement for his mistress who proves to be less than faithful.

experience and inspire emotions" (Orbaugh, 2008, p. 152). This is not a new concept as *Future Eve* demonstrates. One last question that comes about with the possibility of artificial partners has to do with the form of such a partner, its potential to embody ideals and fantasies, as early mentioned in regard to the gynoids of *Ghost in the Shell 2: Innocence* (2004). The question is asked by Gresh and Weinberg in regard to an Anime dealing specifically with AI, *Chobits (2002)*; "after someone has been in love with a perfect humanoid- Persecom, [an android from the series *Chobits*] brilliant, beautiful, loving, giving in all ways – how can he or she ever love a mere human again? Does the Persecom have a soul? What is a soul?" (Gresh and Weinberg, 2005, p. 89) Not to mention the question, does it really need one? Actually there is no one last question at all, but a multitude more.

More than anything, the advent of AI is seen as little more than a gigantic headache, both in Anime and elsewhere. If all war is averted then there must occur some process of assimilation of artificial entities, which started out as owned commodities no less, into human society. On the other hand the concept of AI forces us to consider whether we ourselves are not simply a complex yet flawed machine, which confronts transient concepts such as soul and deity.

3.4 The Existence of the Soul and the Post-Human Entity

Despite the march of science and technology on its path of demystification of the physical universe, human concepts of the spiritual remain dominant, and this is often represented in cyberpunk, and has come into even greater prominence in post-millennial Anime. It is a large concern in this genre that applies to both organic and artificial life-forms, but remains an ethereal and indefinable. Many philosophers have undertaken the task of trying to define the human concept of the soul, and how it might drive our thoughts and emotions, as Gresh and Weinberg point out: "According to Plato, the gods inserted souls into our bodies" (Gresh and Weinberg, 2005, p. 103), and "It was the French philosopher René Descartes who wrote the famous line "I think therefore I am". Descartes was referring to the human ability to consider itself as a distinct individual, a self with a soul" (Gresh and Weinberg, 2005, p. 103). So this is a debate that is millennia old, cyberization and artificial intelligence has simply created another milieu, or

quagmire depending on the viewpoint, for various theories on the eternally esoteric soul to be indulged. Gresh and Weinberg concur: "The battle has raged for centuries: religious soul versus philosophy versus science" (Gresh and Weinberg, 2005, p. 105). And it is an argument going nowhere quick, no wonder Kusanagi surmised that when the Gynoids in *Ghost in the Shell 2: Innocence* (2004) were first given souls, that they would scream 'I don't want to be human!' Even *Ergo Proxy* (2006) seems to beg the very question of sentience and whether the possession of a soul is actually worth the trouble, as Ergo Proxy himself laments: 'Why did the creator decide to give the Proxies souls? We wouldn't suffer if we had no souls'. Like *Lain* (1998) and *Evangelion* (1995) before it; the answer remains poignantly but also repetitively and annoyingly ambiguous.

Indeed *Ghost in the Shell* (1995), including the second film, according to Napier "is a genuinely metaphysical work that is concerned less with individual identity in society than with such philosophical questions as whether one can possess a soul in an increasingly technological age"(Napier, 2005, p. 104). So in Kusanagi's case, does the soul reside in her brain and spinal column the only organic parts of her body remaining, or is it the invisible force that resides nowhere and if so how can it travel with the mind if it is transferred to subsequent artificial bodies, as is "offered by an artificial intelligence known as the Puppet Master" (Napier, 2005, p. 105)? These questions from *Ghost in the Shell* (1995) accrue much anxiety, the protagonist included as Napier points out: "Kusanagi is not completely comfortable in her cyborg identity, and does not totally fit Haraway's paradigm of self-satisfied autonomy" (Napier, 2005, p. 107). The main point of perplexion being the question of whether she has a 'ghost', and interestingly, "it is her body, standing at the nexus between the technological and the human, that can best interrogate issues of the spirit" (Napier, 2005, p. 107). Thus the cyborg body renders her both 'vulnerable and powerful'. This status refers to Tatsumi's Overlord, but can also be traced right back to *Bladerunner* (1982). "While the replicants "fall" into humanness and life in all its heartbreaking transience, Kusanagi takes leave of the human for a chance at a bodiless immortality" (Napier, 2005, p. 113). This is Napier again comparing *Bladerunner* (1982) to *Ghost in the Shell* (1995), and while she states both parties are engaging in quests that are concurrently 'physical' and 'spiritual', they are opposite in nature in that while the machines seek their humanity, Kusanagi seeks the cyberized.

Ultimately though, many cyberpunk Anime texts Napier states, exhibit "a fundamental concern or even unease with the body and thus, implicitly with identity itself. … The new identity that these characters appear to be seeking is one that transcends the categorizing nature of society, especially that of traditional Japanese society" (Napier, 2005, p. 115). Oshii in his films at least, suggests that if such escapist aspirations exist in society, that neither rejection nor immersion, but ultimately subversion of technology will serve the purposes of such rebellious individuals.

According to this then, the potential foreseen in *Ghost in the Shell* (1995) and the possible solution to this dilemma is the merging of AI and cyberized humans into a new entity, complete with its own new world in the form of the net. This also entails the spiritual development Napier mentions, thus the Puppet Master is "inviting Kusanagi to fuse with him in a world beyond the body. Invoking Plato, the Puppet Master begs her to out of the cave and into the light" (Napier, 2005, p. 110). Donna Haraway might find all this very empowering but Napier is quick to point out the cracks in the feminist lens: "Ultimately, Kusanagi's strength and agility seem hollow, underlined by the many dependent, vulnerable and damaged modes in which the view sees her. Furthermore, the fact the supposedly sexless Puppet Master speaks in a somewhat masculine voice and essentially invites Kusanagi to perform a kind of "wedding" with him seems to emphasize Kusanagi's dependent feminine status" (Napier, 2005, pp. 111-112). Napier implies that it may not be incorrect to interpret such a representation of the feminine as a metaphor for all human beings, in that they are increasingly at the mercy of "oppressive and incomprehensible outside forces"[87] (Napier, 2005, p. 112). As has been detailed already, many 'secret councils' have their plans for the evolution of the human species that involve great loss of human life and often this is in aid of what they see as spiritual enlightenment, which is the traditional apocalypse and Revelation becoming entwined in technological concerns again. What this means is life and survival in such Anime tends to come off second to a character's (who represent these plans and ideals) quests for purpose and identity. Whether this is equitable to happiness is yet the same ambiguity

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[87] This is true of many Anime, and it takes its form in all manner of global corporate organisations, shady governments, rogue scientists and secret councils running events from the shadows, such as SEELE in *Evangelion*, the Nobles in *Wolf's Rain*, the Theo-normal in *Texhnolyze* and many other archetypal organisations that appear in the likes *Bubblegum Crisis: Tokyo 2040*, *Blue Gender*, *Geneshaft* and even the most recent Anime being analysed herein; *Ergo Proxy*.

that the Anime discussed are so well known for. For example, any one who hoped for any form of closure or resolution to the issues of *Ghost in the Shell* (1995) in Oshii's sequel *Innocence* (2004) would have been left wanting, although the right questions do thankfully get asked, particularly by Batou, who is allowed the opportunity to ask his 'guardian angel' Kusanagi 'Are you happy?' She responds: 'Happy? A nostalgic feeling I guess, but I'm no longer afraid, and that's nice.' Just as the external forces of the oppressive regimes are incomprehensible, so too it seems, are the lives of post-humans.

The most important question in all of is this is the relevancy to the two worlds; whether the digital and the analogue could exist fully independently. Maybe, but not yet, as it is the digital world that is still highly dependent on the mundane i.e.: the reliance on electricity procured in the analogue world. So until a time as it can achieve true independence, it is my argument that human engagements with the digital will remain an extension, an augmentation available to developed and, by some viewpoints, decadent nations, rather than a universal alternative experience. What this means is that digital technologies, such as AI will remain as a philosophical issue of ethics, as much as it is an issue of wealth and class now, something advocates of technological development may acknowledge but have yet to effectively or realistically address and solve. Also, if this reasoning of technological practicality is continued, there are some aspects of sci-fi that despite various texts' roots in scientific and intellectual literature, simply need to be consciously separated and placed in the fantastical realm, especially now the genres of sci-fi and fantasy are borrowing so much from each other. Colonies in space, despite the mathematical theory of Lagrange points in *Gundam SEED* (2002), are effectively a fairy-tale, and even mecha, despite claims cited earlier that the technology will soon be apparent, may yet still be a failed project. And the most pertinent tool in sci-fi is perhaps the furthest from reality. Gresh and Weinberg state that "robot servants in cyborg form are nowhere near becoming reality and a society that would accept them seems even further away than it did ten years ago. The upswing in fundamentalist religious beliefs casts a grim cloud over the future of technology and the biochemical revolution" (Gresh and Weinberg, 2005, p. 145). But then it is hard also to forget positivists like Hughes, not

to mention everyone in between, who offer both hope and condemnation, sometimes through the literature of cyberpunk and Anime, for the technological future of humanity:

> People are happiest when they have rational control over their lives. Reason, science and technology provide one kind of control, slowly freeing from ignorance, toil, pain and disease. Democracy provides the other kinds of control, through civil liberties and electoral participation. Technology and democracy complement one another, ensuring that safe technology is generally accessible and democratically accountable (Hughes, 2004, p. 3).

If only. For now the only manifestation for many technological dreams and nightmares is literature. New dreams and nightmares are now coming to the fore however, as a more recent technology has taken the centre position on the narrative and moral stage.

Chapter IV: Biotechnology and Beyond

> When science turned its back on the flow of nature, mankind fell from its hand. – Blue Submarine No. 6

Is this a bioLuddite statement? This is Anime, as should be well-established by now there is no clear cut answer and the question remains in the 'yes, no, kind of, not really, it's complicated' department. It is a statement made by the character Doctor Zorndyke in Mahiro Maeda's OVA[88] series *Blue Submarine No. 6* (1998), regarding humanity's quest for advancement outside the laws of nature. The reason this text is being used as an entry point to this chapter is that, particularly through the character Zorndyke, it aptly captures a message of criticism regarding humanity's technological exploits. It also specifically relates this to biotechnology, one of the first Anime texts to do this so explicitly. It also pioneered the use of CGI in Anime. In these regards it as an influential text in sci-fi Anime but is not renowned in academic and intellectual circles regarding Anime.

    Blue Submarine No. 6 (1998) uses the apocalyptic mode of narrative but subverts it, using it as a means to critique the ways desire and ego drive human technological endeavours, which Zorndyke sees as the instigator of all human conflict, which he also equates with the species' overreaching itself. This relates back to the concepts of individualism and division spurring human conflict resulting in inevitable extinction.[89] Zorndyke's reaction to this self-destructive path is ironically to build a doomsday device.[90] Billions of people perish, and Zorndyke's next move is to create a series of new hybrid entities based on human and aquatic species, his children, and send them out to attack the survivors. His reasoning? It is the population bomb again. Thematically *Blue Submarine No. 6* (1998) is very similar in several areas to *Gundam SEED* (2002), and Zorndyke bears an attitude to humanity that is similar to Rau Le Crouset in his disdain for human desire and unending conflict: 'Mankind has grown too large. Ambitions and cravings, vengeance and hatred. How long must the accursed dance continue?' Both

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[88] OVA stands for original video animation, another format in which Anime is released.
[89] See Chapter 2: section 4 - The Stagnation of Human Evolution and its Inevitable Extinction
[90] He creates a device that generates a pole-shift that eliminates the Earth's magnetic field that holds the tectonic plates in check, as well as destroying the Van Allen radiation belt.

believe that desire will overcome humanity, and it will destroy itself. Rau however is entirely nihilistic, seeking destruction simply for its own inevitability. Zorndyke actually has a practical purpose in mind, but in the usual Anime fashion it still involves genocide. 'I thought it could end simply by sharply reducing the number of humans alive.' He states at the series rather anticlimactic finale.[91] Both of these series explore the perceived potentials of biotechnology in an in-depth if equally fantastical manner, as do many Anime texts. They are also closely linked with two other sci-fi Anime themes that have already been discussed in their own chapters; artificial intelligence and apocalypse.

Genetic Engineering is the latest technology that has come to prominence and with it has followed the same utopian aspirations countered with anxious apocalyptic musings for which Anime has become an ideal expression. It should also be noted that that its presence in sci-fi and Anime is not new either, as *Blue Submarine No. 6* (1998) indicates. *Neon Genesis Evangelion* (1995) also featured many aspects of biotechnology, as did *Bladerunner* (1982) and its parent novel by Philip K. Dick, and going back as far as Huxley's *Brave New World Brave New World* (1932). The agendas of many of these literary texts are convoluted and subjective, and this continues in the post-modern era. Such issues are complicated and are not simply a case of weighing the pros and cons of a certain technology, in this case genetic engineering. The attitudes to technology are still divided; human nature however; especially in Anime retains its predictability. As with cybernetics, cyberspace, global and mobile communication and nuclear power, the issue is how humanity implements biotechnology. The technology itself is not the problem, being a morally neutral tool created for humanity's use. The issue in Anime remains human ego and desire, which embodies itself so easily through conflict. In Maeda's texts, both *Blue Submarine No. 6* (1998) and *The Second Renaissance* (2003), the human flaw that is encountered is again its inability to co-exist, with itself, with nature, and the life it creates either inadvertently and purposefully. The divisive ideologies of Transhumanism and bioLudditism and everything in between remain the source of conflict, not the technologies they appraise and oppose. Unfortunately, to grasp the subtle differences and

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[91] When accused of murder he responds sadly, 'It is not murder- I am merely advancing the hands of the clock just a bit. Before it is all too late.'

concerns that have been divided into the two camps would be an academic undertaking in of itself, and thus the binary division is a useful generalization.

Nonetheless, for the purposes of exploring biotechnology in Anime, the definition of a third camp is useful, perhaps necessary, especially for understanding the attitudes conveyed by a character such as Zorndyke, and similar attitudes that exist in Anime regarding humanity, technology and nature. What might be termed Naturalism is another overall attitude that seems to pervade much of Anime, alongside Transhumanism and bioLudditism. The Transhumanist is defined by its valuing of intelligence and freedom above all else, sometimes bordering on hedonism although insisting on virtue. The puritan bioLudditism values the integrity of the human form above all else and sees it as a great and sacred gift of perfect design within an idealised system to which any alteration would anathema, what the Transhumanist refers to as a 'human racist'. The Naturalist is defined by its view of humanity as simply another animal amid a sprawling yet symbiotic eco-system and values each species' role within the ecosystem, viewing the subjugation of one species by another as a disruption to a natural order. This conflicts with bioLudditism, especially its traditional religious aspects, as it removes the hierarchy which situates humans at the top, and is incompatible with Transhumanism which aims to escape all boundaries of natural law and values only intelligent cognitive beings, be they AI, human or animal, or an amalgamation of the three. This can be seen in environmental politics that often crop up in Anime, especially amid distinct groups and communities representing various socio-political mentalities. This chapter means to establish the relationship between these attitudes to biotechnology and how its uses are presented in several sci-fi Anime, both the key texts and several others, forming a greater collective. It will examine how these texts have developed established Anime conventions of AI and personhood theory, apocalypse, evolution, mythology and spiritualism, and deification.

4.1 Genetic Alteration: the Creation of New Life-Forms and Interspecies Technology
To begin with, establishing humanity's goals and aspirations surrounding biotechnology, and how it is implemented, both in actuality and fantasy, is necessary for underpinning the perceived potentials and detriments, and how this resonates in Anime. The most basic aim of any technology is the improvement of human life in some manner. So like

cyberization, biotechnology is heralded as a potential means to restore the human body, this includes the artificial growing of human limbs and organs to replace those that have been lost or become defective. This is one of the less fantastical forms of biotechnology, although it can be seen in sci-fi and Anime.

In Anime where such restorative procedures are present, they are usually glossed over and taken for granted, a normalised medical reaction to loss of limbs or other unfortunate occurrences.[92] What becomes more iconic is when characters in such stories refuse such treatment, which is usually a highly symbolic gesture, or relates different attitudes to different technologies. Ichise in *Texhnolyze* (2003) for example continually attempts to reject his texhnolyzed limbs, as he sees texhnolyzation ultimately as a trapping of elite society such as the Organo who have so viciously abused him.[93] At a slightly more aesthetic level, Yzak from *Gundam SEED* (2002) elects not to have a prominent scar removed from his face, after being defeated in battle by the series protagonist Kira. The rejection of such restorative technology is most often indicative of a need to recall a personal life lesson or mission. This relates to one argument that might be levelled at restorative biotechnology et al: that the ability to infinitely repair broken bodies might engender a fool-hardy mentality in people, and make them less accountable and less thoughtful in their actions. It may also be seen as an extension of consumerist throwaway culture which sees the human body as simply another aesthetic fashionable commodity to be marketed and sold. This is where much of the bioLuddite moral outcries begin, their message echoed in Anime. This is a strain of thought clearly represented by Blue Cosmos in *Gundam SEED* (2002) and the Salvation Union in *Texhnolyze* (2003), particularly its leader, Kimata's preaching: 'I once sought the salvation of the mind through texhnolyzation. However it was a mistake. Texhnolyzation erodes a man's body and his soul.' This communicates both a physical and spiritual abhorrence of

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[92] As with its cyberization counterpart, this form of technology is the least controversial, and the most benign.

[93] This is both similar and different to Jet in *Cowboy Bebop* who has a cybernetic arm, replacing his original which was severed by a sniper shot. He could have had a new arm grown but elected to have the more intrusive and cumbersome cybernetic replacement as a permanent reminder not to run headlong into uncertain situations.

texhnolyzation.[94] Effectively, what is seen as unnatural alterations to the body is what is deemed offensive to the values of bodily purity held by bioLuddites. Such technologies also offer even more unnatural opportunities for the human body as Hughes will attest: "We can plan childbirth from invitro fertilisation to caesarean section, and post menopausal women can bear their daughter's children" (Hughes, 2004, p. 21).

The extension of human life expectancy is also contentious, as it is possible to link it to quests for immortality, and deification, which also pertains to issues of fair and democratic distribution and the eternal class struggle. Nonetheless, Hughes also attests that "[w]hether the "natural" life expectancy under optimal conditions is 80 or 100 years, the human body is certainly programmed to start slowly falling apart after the age of about 20" (Hughes, 2004, p. 25). This is another ideological question amid the argument. Would extending human life simply be a readjustment of the human body's programming, or is it disruption of a natural order, even if we negate the issues of technological distribution by assuming universal availability? This is why such studies as the NBIC: Nanotechnology, Biotechnology, Information Technology and Cognitive Science, a scientific convergence study by the National Science Foundation have come about in the U.S., which Hughes cites, and it "concludes: "With proper attention to ethical issues and societal needs, converging technologies could achieve tremendous improvements in human abilities, societal outcomes, the nation's productivity, and the quality of life"" (Hughes, 2004, p.07).

Biotechnology has also encountered opposition in the past from its genetic experiments on plant animal life, much of it in regard to foodstuffs. The developing of fruits and vegetables that are larger, more tolerant to disease, capable of growing in unfavourable terrain, are goals of creating generally sturdier plants for both economic and humanitarian reasons. This comes up specifically in *Blue Submarine No. 6* (1998), but is met with derision by Zorndyke:

> Wheat that would grow at the poles. Potatoes that would grow in the desert. The utilization of artificial protein under the sea. Useless. All of it useless.

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[94] The technology is now solely a means to cybernetically replace limbs in the story but was also formerly used to attach limbs 'donated' by other people, but this form of texhnolyzation 'is longer an option' according to Doc, why that is is never explained.

Even doing that wouldn't change us in anyway. Rather it would only increase our arrogance, wouldn't it?[95]

His point is that increased resources and increased economic production only serves to spur human competitive nature, hence conflict. It also compounds the problem of the population bomb, which is what drove Zorndyke to bring down an apocalypse on humanity. The many hybrid species he creates, fulfil the dual role of aiding his morally dubious cause of 'reducing' the human population, as well as, perhaps hypocritically, trying to teach humankind to value diversity of life, by revealing its own image in other species. Most humans in the series however fail to see the mirror.

Zorndyke's hybrids in general represent the concept of the chimera that has become the favourite motif for genetic engineering, not just in sci-fi and Anime but in pop-culture in general, especially in America, where the fusing of human and animal DNA has reached the point of cliché, thanks largely to comic books and cartoons. That is not to say that combining human, animal, and plant DNA is not being considered in the scientific community though, as Hughes notes: "We are already creating "chimeras" with genes from humans and other creatures" (Hughes, 2004, p. 92).[96]

Biotechnology pertains to the same moral ambiguity that has been Anime's hallmark, as to the changes that will be entailed. This returns the argument to the blurring of humanity with the Other, previously embodied by cybernetic and digital implants. But cyberpunk and much of sci-fi is as much a bio-engineered world as it is a mechanical and digital one, and represents a world experiencing what Hughes calls "the convergence and integration of biotechnology, molecular manufacturing and computing" (Hughes, 2004, p. 5). Molecular manufacturing refers to the latest technology to come about which has the potential to further augment many other technologies. Also referred to as nanotechnology; robots the size of viruses, that in sci-fi blur the line between the cybernetic and the biological, just as biomechanical androids have done. Gresh and Weinberg describe them thus: "When we start thinking about the bridges between biological systems and electronics we couple thoughts of smart devices and materials

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[95] This is despite the fact they are technologies he admits to helping develop during his involvement with Project Blue.
[96] Such as those seen in *Full Metal Alchemist*, although the results are invariably atrocious in that series.

with the fields of biotechnology and nanotechnology" (Gresh and Weinberg, 2005, p. 79). In many ways it seems a logical way to create an artificial human; electronics to mimic brain patterns and artificially grown bodies to accommodate such brain matter. Naturally, many of the uses of nanotechnology can be seen as part of everyday communications in the Ghost in the Shell multiverse. The cyberbrain, what Hughes refers to as a 'brainjack', is a concept in the series that is part of another theory of how the human body and mind might be enhanced in a future that Gresh and Weinberg also describe: "Someday, we'll have nanotech systems embedded everywhere: microscopic, interconnected, and widely distributed networked systems that exist in our walls, shoes, hats, pillows, and transportation vehicles, as well as in our very flesh" (Gresh and Weinberg, 2005, pp. 79-80). Anyone else feeling uncomfortable? However this pertains to a seemingly universal 'us' or 'we', when a conclusion based on historical social trends would be more likely to find these collectives are actually quite exclusive, at least more than 'we' would care to believe.

For the Transhumanists, such technology presents little threat, suggesting that such altered life-forms should be entitled to the same rights that humans have. But in the case of AI, having a commodity acquire sentience and assert its individuality is never that simple in Anime, especially when large amounts of resources were invested in its creation, and are hardly 'convenient' in sci-fi societies where the hyper-capitalist mode overrides civil liberties. Still, in sci-fi complete control over one's body is entirely acceptable if one is paying, which 'partially' covers Transhumanist values. This includes the right of the individual to control its genetic makeup; in order to alter their appearance, their physical and mental aptitude, as well as their gender. Hughes claims that "[p]eople should be allowed to use technology to sculpt themselves to fit their personal visions, whether they fit the binary gender system or not" (Hughes, 2004, p. 261). *Gundam SEED* (2002) does not mention gender reassignment, but it covers almost everything else within the human genome. It allows parents a high level of control over the design of their children, including gender and even down to eye-colour.[97] One scientist goes as far as to try and create artificial wombs to further reduce discrepancies between the design for a

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[97] This is achieved by removing the embryo from the mother at the earliest stage of conception, conducting the genetic modifications, then returning it to the mother's womb for gestation.

child and its actual outcome. But this goes too far even for the other scientists involved and such a process never becomes publicly available, although a few children are produced from it, much to their detriment.

Much of the bioLuddite objection to Transhumanist technologies can be can be put down to a 'slippery slope' argument; that once one technological development is administered to society, more changes will follow and irrevocably alter human anatomy, culture and relationships until they are unrecognisable. Given the rate of advancing technologies especially in computing, electronics and media, the argument seems to possess some validity. Genetic Engineering represents the most intrusive technology to come about, especially if genetic changes are inherited by future generations. The potential harm that could be wrought could well be permanent, and this is what denouncers of biotechnology claim. In sci-fi and Anime this is enacted in several ways, either in the development of a super-virus, the creation of an aggressive superior species, or the favourite of Anime: mass sterility. Such fears are present in any country with access to such technology, and is a much a presence in American sci-fi as it is in Japan as Levi makes note of: "Most Americans understand the fear that artificial intelligence and genetic engineering will get out of control" (Levi, 1996, p. 93).

Much of Anime and sci-fi thus acts as a counterpoint to such optimistic attitudes held by Hughes to technology, including genetic engineering, which bears the same utopian markings that heralded the coming of the machine during the industrial revolution. This is the same dream that believed the world could be made better and easier, which was effectively quashed in sci-fi narratives and gave way to the dominant dystopian mode of modern narratives, which Anime has embraced wholeheartedly, and has presented many horrors and conundrums behind the technological façade. One particular conundrum is the prospect of 'post'-human rights.

4.2 Human Rights, Person Rights

Much of the fear of technological advancement can be seen as specifically relating to AI. The android of cyberpunk is in many cases simply an update of the older popular image of the robot, placing flesh over the machine and erasing the line between the mechanical and the biological altogether with the emergence of biotechnology. The biomechanical

construct confronts the notion of AI in a very personal way, and is where both the likes of *Bladerunner* (1982) and *Ghost in the Shell* (1995) gained much of their poignancy, through the amalgamation of flesh and blood with the electronic machine. This confronts us with the question of what it means to be human, and what it means to be alive, and reaffirms Personhood Theory as a legitimate challenger to the traditional 'human' classification, and all the rights and liberties that humans lay claim to as living, cognitive beings.[98] Personhood Theory states, according to Hughes: "Only self aware persons can have rights. "Persons" don't have to be human and all humans are not persons" (Hughes, 2004, p. xix). Hughes terms bioLuddites 'human racists' for only allowing humans to be citizens.[99][100] This however does not answer the aforementioned questions, but suggests that an answer should at least be attempted, and not merely hypothetically. In light of that, Hughes asks, "[w]hat does an entity need to pass from the status of property to person to full citizen- human DNA? Intellect? Communication skills? Does the right to control one's body trump other people's distaste for the choices you make" (Hughes, 2004p. 63)?

The bioLuddite argument against Person-rights and biotechnology resulting in AI is not entirely based on knee-jerk repugnance, but also on sheer pragmatism. The answers to such questions have thus far been frustratingly abstract, at best subjective, and given that 'human' rights have yet to be ensured on a global level, non-human persons would only make an already complicated world pricklier. Thus from a bioLuddite perspective that Hughes cites: "Cloning and inheritable genetic alterations can be seen as crimes against humanity of a unique sort. They are techniques that can alter the essence of humanity itself (and thus threaten to change the foundation of human rights)… Membership in the human species is central to the meaning and enforcement of human rights" (Hughes, 2004, p. 79). This was mentioned at the very beginning but it remains crucial to the conflict between bioLuddites and Transhumanists in regard to human rights

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[98] See the Cyberization and Artificial Intelligence chapter.
[99] Of which Maeda's *Second Renaissance* has been repeatedly discussed in regard to this.
[100] Hughes further states that "We do not need new agencies whose sole purpose would be to ban technology on the basis of vague and spurious anxieties" (Hughes, 2004, p. xix). Though he does state: "I sympathise with the bioLuddites that every regulatory agency has been infiltrated and crippled by the very industries they are meant to regulate, especially under Bush II [George W. Bush]. But the rational and progressive answer has to be to reclaim the regulatory agencies, not to forbid the use of technology" (Hughes, 2004p. 22).

and in sci-fi Anime and is directly relatable to the conflict, communication between, and coexistence and integration of genetically engineered entities with traditional humanity. Zorndyke in *Blue Submarine No. 6* (1998), in a distorted fashion is encouraging all of these with his hybrids, and simultaneously, strategically imposing mutual annihilation as the only alternative in an all or nothing gamble.

> They are my children. Like you they are inexperienced beings. But you can learn from each other. Learn to respect, even understand each other as equals. Just as every other living thing in this world.

The hybrids are physical embodiments of this mad scientist's desire to reconstruct the collective human mentality, to force a reassessment of its priorities and goals.

Conversely, in *Wolf's Rain* (2004), the creation of a new species by the scientific elite is an embodiment of the desire to further individual desire and fulfilment, as seen in the creation of Cheza, in an attempt to open the gates to Paradise. Cheza is the final product of a batch of failed creations of humanoid lunar flowers called the Honabito, made by 'some Nobles with too time on their hands'. When Darcia I's experiment fails and brings about the apocalypse, the 'Honabito who were the unfortunate and imperfect ones had no choice but to wither and die.' Cheza herself is naught but a tool and a trophy, possessing affinity only for the wolves, who die protecting her, never to see Paradise. Cheza reveals herself as part of an evolutionary cycle, not a conduit to the divine. In essence she is an anthropomorphised Tree of Life, capable of reseeding the Earth once life from it has been scoured, a part of the Earth's cycle of death and rebirth, revealing a more mundane notion of Paradise. There is an environmental message buried in this turn of events. It turns out that the Darcia family long ago discovered the original 'Tree of All Seeds', and sealed it to prevent the next Paradise from occurring, opting to create the Honabito and Cheza instead, in an effort to create a Paradise for themselves. This act results not only in an apocalypse, but an aftermath of bitter rivalries between the remaining Nobles and wolves that at several instances threatens to end Cheza's life, the only entity who can start life over when this cycle of the world comes to a close. The message in this and other Anime is clear: humanity tampers with the natural world at its

peril. Hughes takes issue with this fable however, purposefully differentiating between human enhancement and sci-fi dystopia:

> The risks of human enhancement are also fundamentally different from those of grey goo, super corn and Terminator robots. It is unlikely that a genetically engineered human, or even two, will ever escape into the woods and eat the planet. Genetically or cybernetically modified humans are no more likely to be eco-destructive than humanity versions 0.1 through to 1.0 (Hughes, 2004, p. 119).

This is about as preposterous as proposing the possibility of the 'woods' themselves eating the planet,[101] but would do nothing to answer the more relevant ecological of questions of how to so solve problems like deforestation , or the more philosophical recurring question of how humanity would actually cope with the presence of non-human intelligent life.

This follows another familiar event that has also been discussed in the war with machines, as the human response to the advent of AI is usually a resounding 'kill it!' The prejudice against biological AI is simply follow-on from anxiety around cybernetic technologies and the AI birthed from it, which became a cornerstone of cyberpunk, and relates back to the breakdown of human society due to the establishment of digital communication. This only reaffirms humanity's portrayed insecurities with its own identity in cyberpunk, let alone communing with AI, and this is why the response to it is usually of extermination. In such cases true AI, both the cybernetic (the autoreivs in *Ergo Proxy* (2006) for example) and the biological (such as Zorndyke's hybrids), are accidents, not intended by human design. The response in Anime swings between the assimilation of either humanity or the AI into the other, and plenty of texts exist portraying each. The only consistent theme is how humanity is insufficiently prepared to coexist peacefully with a new sentience, at least yet. Thus the war with the Other remains the most prominent image.[102]

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[101] See *Origin: Spirits of the Past*, Chapter II: Cyberization and Artificial Intelligence, 2nd section: Weapons and Accidents of Mass Destruction

[102] One, example of human redemption might be in the Anime version of *Elfen Lied*, with Kohta's forgiving of Lucy, a mutant Diclonius who murdered his family. That being said, any sense of reality sits about as well with *Elfen Lied* as it does with *Origin* and its 'the attack of bio-engineered forests from the moon' premise.

Overall Anime suggests that humanity would make bad parents to all manner of AI, although there is potential, albeit at the cost of few billion lives in most cases, something a Transhumanist like Hughes might not entirely disagree with:

> Once we've been knocked off our pedestal of moral superiority [to animals]… society will accept measuring a biological 'platform's' … moral worth by determining its level of consciousness. Thus post-humans, animals genetically engineered for intelligence, natural fauna, and even machines would all be measured by the same standards (Hughes, 2004, p. 111).

Some however believe the development of human based rights to rights of all cognitive entities will culminate in totalitarianism overseen by the post-humans. This is seen in much of Anime as well, and is another example of Tatsumi's Overlord theory.

4.3 Genetically Engineered Societies

Several sci-fi Anime texts portray human civilization and society as the means for which humanity has removed itself from the rule of nature, and this holds to the Transhumanist ideals of trying to push aside as many of the natural boundaries surrounding humanity as is possible. Gresh and Weinberg state that there "[a] number of scientists hold the same belief: that humankind is longer controlled by evolution but is controlling evolution" (Gresh and Weinberg, 2005, p. 182). That is we are no longer a part of nature because we have surpassed so many of the laws that govern it, we are no longer products of our environment, we create environments to better suit human existence. This has various consequences, though Transhumanist theory prescribes to its usual optimism. Hughes suggests the possibility of even reversing such alterations if desired: "artificial chromosomes can also be fitted with chemical switches, so that parents, or the child herself when she is of age, can turn the genes on and off" (Hughes, 2004, p. 15). Applying this theory to designer babies allows for the creation of genetic traits, aptitude for various skills whether it being mathematics or long-distance running. Hughes further suggests that "if it turns out the gene turns them into the Hulk, we could just turn them off" (Hughes, 2004, p. 15).

The controversy surrounding such potential remains vocal, and it remains the focal source of conflict in *Gundam SEED* (2002), in the bloody wars between the

Naturals and the Coordinators. A lot of this has links with the abortion question, at what point can a human foetus be counted as 'living', as such technology might, as occurs in *Gundam SEED* (2002) entail the removal of the embryo from a mothers womb, and even remove the natural gestation process entirely, which is a potential Huxley took issue with and critiqued through his *Brave New World* (1932). Hughes cites the physician-philosopher Leon Kass on this as well: "For Kass the issue was not that the small ball of cells had a soul or that its creation was a sin, but that overcoming the limitations of the body would lead us to devalue human life" (Hughes, 2004, p. 84). One Change Kass anticipated was that Huxley's vision would be made real, and future technology would permit embryos to be grown in laboratories, at first for research and eventually as an alternative means to have a child. Kass identified one underlying reason people find the idea disturbing: "embryos outside a mother's body are neither pre-born, nor born, neither a part of the mother's body nor members of society" (Hughes, 2004, p. 84). So this also relates back to the issue of human rights and how to apply them to a human who is not 'born' into society. The removal of parentage in *Gundam SEED* (2002), suggests a detrimental effect on such 'created' children. Both Kira and Rau are products of such genetic engineering; two of the few children created in artificial wombs, experiments offered no affection from those who created them.[103] This is another representation of the breakdown of society due the destruction of the family unit wrought by technology[104]. *Ergo Proxy* (2006) also represents a society almost entirely built from an artificial womb-sys(tem), forgoing sexual reproduction entirely,[105] where each citizen is designed to fulfil a specific role or niche in its society. Romdo in *Ergo Proxy* (2006) is opposite in nature to Earth and the PLANTS in *Gundam SEED* (2002) and represents a full embracement of such a society; the literal and metaphorical sterility, the population coercion and control, and the genetic 'destiny' given to every fellow citizen within the totalitarian 'Boring Paradise'. This all pays homage to the fact that little attempt has been made to address the

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[103] Rau is even a direct clone, and wears a mask for much of the series, implying shame at resembling his 'father' who did not care for him.

[104] See Chapter 2: section 6 - The Psychological and Social Apocalypse

[105] See Chapter I: section 3 - Ergo Proxy

actual physical risks of such experimentation with technology not fully understood, and the consequences on living, feeling beings.[106]

The advancement of such technology including genetic engineering has been used by Hughes as the basis for a need of a global government, one with far more power than the current United Nations. Transhumanist theory would ideally like to see the division of the world into nations abolished entirely, largely in light of the destructive power modern technology has proffered, which makes conflicts between nations gambles that affect more than just the combatants. "As technology advances, so does the risk from new weapons and accidents of mass destruction… Technologies of human enhancement… make the case for strengthening transnational governance even more urgent that it was in the era of nuclear weapons and germ warfare" (Hughes, 2004, p. 264). One scientist Hughes quotes captures this position rather passionately:

> There is no salvation for civilization, or even the human race, other than the creation of a world government. With all my heart I believe that the world's present system of sovereign nations can only lead to barbarism, war and inhumanity, and that only world law can assure progress toward a civilized peaceful humanity. – ALBERT EINSTEIN (Hughes, 2004, pp. 263-264)

Exceptional idealism from a great mind, only, how we could accomplish a single government with a single set of laws and the ability to enforce them globally amid the sea of cultures with differing values is beyond this writer. Heinlein imagined such a government in *Starship Troopers* (1959), which divided society into the soldier-citizenry and civilians, the right to vote and participate in government awarded only to those who served a term in the military. A pragmatic approach for certain, but also a vocal denouncement of liberal democracy, and a justification for human imperialism in the galaxy.[107] *Gundam SEED* (2002) also attempts a world government in a universe where human nations extend beyond Earth, which Gresh and Weinberg describe: "Thanks to genetic engineering, the world is populated with a new kind of human known as Coordinators, they live in space colonies. The old-fashioned, ordinary humans are known

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[106] Rau for example is physically unstable as well as mentally, and one could argue the two defects are conjoint. His cloned body is subject to rapid aging, which has to be constantly kept at bay with medication.
[107] Not to mention capital punishment.

as Naturals. True to Gundam form, war breaks out between the Coordinators in space and the people left on Earth" (Gresh and Weinberg, 2005, pp. 67-68). Another example of a transnational government is the lesser known but equally intriguing *Crest of the Stars* (1999), which is the first series of collection referred as *The Stars Chronicles*. In this series humanity is ruled by the Abh, a genetically engineered off-shoot of humanity sent out into space as scouts to explore the galaxy. However, possessing superior intellect and mastering space-travel they revolt and conquer humanity and form the Abh Empire, giving themselves the name 'Children of the Stars'. The Abh are haughty, long-lived (200 year life-span), alien in countenance, all produced artificially, and are generally disdainful of planet-dwelling humanity. Their only decree is that Abh will control all space-travel, as a means to avoid interplanetary conflict, as they believe multiple interstellar nations would surely result in this. This pragmatism is similar to *Starship Troopers* (1959), and it shares its largely totalitarian views.

Genetically engineered societies that forgo world government are far more tumultuous, and these examples have mostly remained on or within close vicinity of Earth, and most of them pertain to the apocalyptic mode. This includes the Nobles of *Wolf's Rain* (2004) who fell from grace, though they 'once extolled the virtues of this culture by using an amazing form of alchemy. They blazed a path to the stars and opened the doors to space and time.' But as has already been detailed they got greedy. Romdo in *Ergo Proxy* (2006) is equally dystopian, as is the world beyond, its overall governing force is too far removed to be considered a 'word-government', and the Proxies are diverse, artificial and disposable Gods, designed to be killed off once they have fulfilled their purpose. The 'Malice implanted by the creator' only sews homicidal tendencies in the Proxies and like many other artificially created children in Anime, they are given no affection from their creators and find only despair in their creations.

No matter how many unifications of humanity occur in sci-fi, the species regularly expand beyond them, creating new divisions. Texts like *Starship Troopers* (1959) and *Gundam SEED* (2002) and the others do beg the question however; of whether remaining on the planet is actually an option for humanity in the long scheme of things. Gresh and Weinberg cite the scientist Gerard K. O'Neil in regard to this: "Is the surface of the earth really the best place for an expanding technological civilization?

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After doing dome research, the answer appeared to be, "no it's not"" (Gresh and Weinberg, 2005, p. 130). For sci-fi Anime what it also implies is that humanity, no matter how advanced, will always opt for a hierarchal and class based civilization.[108] This includes the Nobles in *Wolf's Rain* (2004) and the ruling elite of Romdo in *Ergo Proxy* (2006). This questions whether biotechnology is part of a means of adding a higher echelon to the hierarchy, or a chance to transcend the hierarchy itself, or does the desire for individual control naturally entail control over others, that is, how intrinsic is hierarchy in the distribution of technological improvements? In the sci-fi Anime of this study, the vehement insistence on such dystopian worldscapes seems only to emphasize the egotism and pettiness of such class-ridden autocratic societies. Amid the technological ambiguities is a pervasive 'if only' message, a cautionary fable incorporating multiple familiar ideologies within unfamiliar worlds. To reiterate again; sci-fi Anime, even more so now, contends that ideological struggles and elitism, not technological progression will prove humanity's downfall. Hughes reflects this attitude in the real world: "Yet unfortunately, the world is not becoming more equal, and the persistent gap between the world's wealthy and the world's poor is a serious threat to both democracy and access to technology" (Hughes, 2004, p. 52). But the structure of hierarchy is a means to control individual human desire, which is the ultimate conundrum at the heart of conflict in Anime: If not controlled, humanity's competitive nature will drive it to devour itself. But if individual desire is eliminated entirely, the very will to live, the raison d'étre, is removed. Antagonists and villains in Anime often derive their beliefs from these two extremes. The likes of Zorndyke and Rau Le Creuset occupy annihilationist mindsets of one form or another. Others such as Kano in *Texhnolyze* (2003) and the Nobles in *Wolf's Rain* (2004) opt for totalitarianism. Nonetheless, such characters are infused with an epic near divine status, imbued by the supernatural technologies they wield.

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[108] Class struggle has been continually identified in this study as one of the social concepts entwined with technological development sci-fi Anime, another trend that continues in the biotechnology arena and remains obvious in a multitude of series, via various socio-political organisations.

4.4 Magic and Mythology: Religion, Spiritualism and Playing God

The presence of religion in sci-fi Anime has become a now well established and accepted trope and has served to ensure the complex and layered nature of its texts and the esoteric themes it conveys. This has become even more prominent in the post-modern era, where an even greater amount of religious and spiritual themes have become important motifs and symbols, including Eastern and Western philosophy, theology and mythology, and including more nature-based concepts of primalism and shamanism. The reason for this is perhaps the competition between science and religion for rights to the supernatural plain, to the greater truths of world, such as can be seen in debates between evolutionary and intelligent design theories of life on Earth. Shirow Masamune captures this narrative development, justifying his use of it in his own manga:

> The fact that I have included a lot of religious references in my comics recently – Orion is another example – has nothing to do with the popularity of new religions in Japan. I include the reference because I thank that as society ages and enters an era where hi-tech and philosophical problems are increasingly intertwined – issues regarding brain death and the environment – organized religion is one of our biggest obstacles. At the start of the twenty-first century, around the time a saviour is prophesied to return, I believe the fusion of science and religion is going to be one of the most critical issues facing us. Religion will have a huge role in issues of abortion, blood transfusions, bio-meat for consumption, and the use of foetuses and the dead for bio parts (Shirow Masamune, 1991, p. 363).

Thus Anime (in this case following on from Masamune's manga) complicates the technological world with the inclusion of religiosity and spiritualism, although this can equally be seen as technology and scientific data complicating the world of traditional religion. It is also an unresolved and ongoing conflict that long predates Anime.[109] Anime's use of religion, spirituality and mythology is unique in such a case, as it rarely represents an endorsement of any specific theological ideology. Instead it is used primarily as a motif or metaphor for technology, or more often as an amalgamation of the two into a revolutionary hybrid in the same manner that Masamune suggests.

From the religious perspective of technology, the main contention is whether the existence of a monotheistic God can be maintained in light of scientific theory regarding

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[109] See Chapter 3: section 4 - The Existence of the Soul and the Post-Human Entity

the Darwinian model of evolution. This issue is also at the heart of religious resistance to scientific methods which would allow humanity autonomy over its evolutionary destiny, even to redefine itself as a new species and in turn create new species of its own design and desire. This has led to the development of the Intelligent Design theory in religious branches of the scientific community. It is a more covert means of maintaining the relevance of the Judeo-Christian belief system and the primacy of a divine godhead over the universe. Gresh and Weinberg cite one adherent biochemist in regard to this:

> According to Behe, evolutionary actions cannot explain the emergence of certain complex biochemical cellular systems. He argues that the systems therefore must have been deliberately designed by an intelligent being. He never names the being (Gresh and Weinberg, 2005, p. 178).

But this brings us back to the question of what is intelligence and makes no attempt to explain this being's 'intent', which is left conveniently vacant for traditional religion to fill the void. However science seems equally intent on breaking down the spiritually transcendent nature of religion into quantifiable data, for which neurology is proving, from the traditional religious standpoint, dangerously effective, which Hughes makes plain:

> The neuro-sciences are rapidly identifying the chemical pathways and brain structures that generate religious experiences… Andrew Newberg has been imaging the brains of people adept at prayer and meditation, and showing which parts of the brain are involved… [Also] "Entheogen" researchers are working on the relationship of drugs and religious states[110] (Hughes, 2004, p. 49).

Aside from monotheistic and dominant religion, several sci-fi pre and post millennial sci-fi Anime also made ample use of other spiritualities and especially older mythologies. Anime regularly explores various potential directions, and draws on theology that stretches from its native Shinto and Buddhism to Judeo-Christian mythology, to ancient Babylonian and even Greek, Roman and Norse legends. Many

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[110] This is a theory than Anime can be seen as adopting as well. The AT field in *Evangelion*, the impenetrable barrier of the soul is a deeply psychological as well as a spiritual concept, penetrating the AT field allows for psychic communion between entities both humans and angels, but risks the destabilization of the self.

religious aspects appear alongside science and evolution as symbols and allegories, such as the Tower of Babel in Oshii's *Patlabor* (1989) and Rintaro's *Metropolis* (2001). Paradise in *Wolf's Rain* (2004), as well as the biochemical technology of alchemy, possess both physical and spiritual traits; alchemy being the path to the divine but illusory Paradise. It also implies the stated link between drugs and religious states, which it combines with shamanistic themes of spirit journeys.[111] While not concerned with deity specifically, *Texhnolyze* (2003) also has several spiritual themes, also represented through a very shamanistic spirit journey in Ichise's case, when he ascends to the world above. The Salvation Union also represent a spiritual philosophy, that of a fanatical bioLuddite group. There is also Ran, the Seer who is followed by the people of Gabe, who form a more distinctly religious sect in the series. *Ergo Proxy* (2006) while also concerned with the nature of deity, also makes analogous use of Greek mythology. The chief scientist Daedalus is named after the inventor who built the Labyrinth for King Minos.[112] He also creates a clone combining the Proxy Monad with the object of his affection who rejected him, Re-l. In the final episode of the series, the Monad/Re-l clone is seen flying towards sun, where she disintegrates, in reference to another Daedalus myth, in which he built a pair of wings for his son Icarus, but he flew too close to the sun, melting the wax that attached them, and fell to his death. The myth is another cautionary fable in the series for humanity's technological exploits and *faux pas*.

The risks of technological advancement are one concern in which religion has involved itself, though this may also be interpreted as a cover for its loss of primacy, as science continues to conquer the supernatural plain of truth and knowledge. The post-human entity's greatest adversary is thus traditional religion. A substantial number of sci-fi Anime have become both antagonists and unifiers, combining all manner of theology with new technology mythology and fable. This journey to the techno-spiritual future seen in Anime may well portend the hybridity that may be required for religion and science to reach a peaceable compromise.

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[111] Kiba in the series is found unconscious under a large plant which is said to grant those that sleep under it access to the Garden of Eternity, one of the forms of Paradise that is ultimately rejected.
[112] Romdo is referred to several times in the series as a Labyrinth. See Chapter I: Aesthetics and Archetypes, 3rd section: Ergo Proxy

4.5 Techno-Shamanism: Communing With Urban Spirits, Spiritual Journeys

This hybridity of the technological process in cyberpunk narrative represents a world in a perpetual state of transition, acknowledging its own approaching redundancy with the same content satisfaction of Kusanagi's utterance 'the net is vast and infinite' in *Ghost in the Shell* (1995). So in this, the post-modern era, the evolution of cyberpunk into post-cyberpunk, steampunk, retro-science fiction and the genre's foray into more fantastical realms should seem only natural. Bolton expressed a dubious attitude toward the creation of dichotomies that function to define the human and non-human, differentiating themselves from the amalgamated entity. He made the point that entities, whether they were artificially sentient, cyberized or bio-engineered, were themselves "points of excursion rather than destinations" (Bolton, 2008, p. xi). In fact it is the journey itself that has become the focus in several post-millennial sci-fi Anime, not the just the nature of the present state of being. The journey through the technolized world has synchronized itself with the quest for identity and meaning of existence, the raison d'être. These journeys have very shamanistic and primal aspects to them and can represent, both metaphorically and literally, something not unlike a spirit journey. Whether the characters that go on these quests succeed in their missions seems almost irrelevant when the most recurring message in these texts is that there is no end, to anything. All three of the key texts contain aspects of this recurring narrative structure and theme.

Was it really worth it?

Iggy's death, ensuring the protection of his raison d'être

Ergo Proxy, 2006, Shukou Murase, Manglobe, 575mins

‘I feel- very sad, Quinn.’

Pino, an autoreiv (android), learns of sadness and death.

Ergo Proxy, 2006, Shukou Murase, Manglobe, 575mins

In *Ergo Proxy* (2006) the journey can be related to anamnesis, meaning both memory and recollection, as the series deals innately with the amnesia and dementia of its characters and uses it as part of its psycho-analysis. The journey suffices as the device for which to restore and form the debilitated or vacant psyches of its characters. In this way Ergo Proxy's human persona, Vincent Law is able to confront the suppressed supernatural aspects of his being. His Proxy side tells him of how the world ended: ‘there is misfortune in the stars, the sky is lost and the sea's frozen over.’ Even an anthropomorphised ‘gatekeeper of memory’ emerges from his psyche, in the series most esoteric and psychological episode, to help reconcile the human Vincent with the deity-like Proxy. Despite trauma along the way, the journey allows the human personality of Ergo Proxy, Vincent Law, to build relationships with his two companions, and witness the potential for the world's rebirth, despite the nihilism that consumes many of the other Proxies. The journey inevitably leads Ergo Proxy back to his home city to confront the other half of his ego. When taunted and questioned by him as to whether he ever had memories to begin with, Vincent simply answers:

> The journey. That's what was needed. The ruins of this world are springing back to life. I saw what was happening to the world out there, I heard it, touched, tasted it, felt it to the depths of my soul.

The other half, Proxy, amends this poignantly as well:

The arc and the cradle will nurture you, but they will 'not' educate you.

The debate is similar to that of 'nature vs. nurture', in this case that experiences shape the person; that personality is not necessarily set at birth. This is even more evident in the case of the autoreivs who become infected with the cogito virus. The series writer Dai Sato has even stated that the now sentient autoreivs "have to decide whether the virus that infected them created their identity, or whether they gained their identity through their travels" (McGray, November 29, 2005). The answer for both autoreivs concerned seems to be both. Without the spark, the cogito virus, they would never have been inspired to go on their journey of self-discovery, but it is the journey itself that allows them to develop as persons. Pino, the autoreiv girl-child, learns about life and death, happiness and sadness as she accompanies Vincent through the wasteland. In one rather poignant scene, she searches for 'another' Timothy, a young boy who is killed, and ponders aloud 'that's weird' when he doesn't answer her calls. Another character has to explain to her, and subsequently a tender if melancholic conversation ensues:

> Pino, when a person dies that's it. You don't get to see another one of them again.
> What? Really?
> That's how it works.
> OK, but I still want to play with him some more.
> Are you sad Pino?
> Am I sad?
> Yes dear. What you're feeling in there right now, that is what we call being sad.

When she witnesses another character die before her, she grasps the connection between death and sadness. Through experience, tuition and mimicry, she develops more of a personality and emotional connection, particularly toward Vincent, from whom she derives much of her 'happiness'. Re-l's entourage Iggy, experiences the more detrimental aspects of emotional connection and dependence, and comes to resent his servitude to Re-l, who refuses to acknowledge him as a person. For him, his raison d'être, his devotion to Re-l is not reciprocated, and when she tries to send him away he abducts her. This links back to the idea of AI emerging in human 'property', and all the complication that

entails, but Iggy asserts his right and his need to be acknowledged: 'You don't get to write me off just because I've gotten complicated'. In the end, he sacrifices himself to protect Re-l, and his final outlook on his short life swings between revulsion and longing: 'You weren't worth what I sacrificed, but your death would've made my life meaningless'. His is a tragic existence, as his bond to his master is only intensified by the acquisition of his soul.

Journey from the false Paradise.

Kiba escapes through the tunnel of light

Wolf's Rain, 2004, Tensai Okamura, Bones, 750mins

The surrealism of *Wolf's Rain* (2004) is easily the text that most accurately equates itself with the spirit journey. The wolves are all on a journey to find a mythical Paradise, which is visualised and interpreted as both a physical and spiritual voyage. This can be seen in the imagery and motifs such as the anthropomorphised spirit guides the wolves encounter who confound them. There is an enigmatic owl who speaks in riddles, a seductive lynx who is trapped in the Garden of Eternity, a giant walrus who upon defeat offers his flesh as sustenance, not to mention the Flower-maiden herself, Cheza, who at one point leads the wolves over a road of lunar flowers in the light of the full moon. The falsehood of all of the Paradises has been discussed, but it by no means entirely negates the visual sequences that depict the supernatural periods of this journey.[113] But *Wolf's Rain* (2004) is also a tragedian narrative at heart, and the beauty of the supernatural

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[113] Kiba's escape from Jaguara's false Paradise is the pinnacle in the series in this regard, which sees him running through what seems a tunnel of golden light back toward reality.

seems only to accentuate its illusory nature, and ultimately Paradise is rejected for the stark reality of the world's end.

     Texhnolyze (2003) situates itself somewhere between the other two. The series has several story arcs, into which the protagonist Ichise becomes more and more entangled as he ascends to the higher ranks of the city's top gang, the Organo. For the Organo's leader, Onishii, the city itself is a guiding voice, which he claims to hear, in a kind of urban shamanism. The voice of city, it is revealed, is Ran the seer.[114]. For the most part the journey is a very visceral and painfully physical one, detailing Ichise's dismemberment and subsequent texhnolyzation, a journey through another technological landscape. The journey of Ichise and his companions to the above-world sees an abstracted surreal parody of Western suburbia and commerce. This world is also perilous, but in a quieter and subtly more sinister way than *Wolf's Rain* (2004). Doc who accompanies Ichise there, seeing the disconnected state of decay of the Theo-normal, also gives into despair, her quest to restart human evolution through texhnolyzation crushed as she witnesses its end result. She acknowledges her kindred with them, saying: 'I'm already one of the dead.'[115] Ran, the girl-seer also appears to Ichise as a silent apparition, as he ponders on the ways he may have changed upon his journey, but admits 'what I'm about to do now is what I've been doing all my life just to survive.' What he is about to do is kill Kano, who's 'proper ideology' has resulted in the death of all the people in Lukuss. Kano's words are even more bewilderingly incomprehensible: 'Having expanded my mind by texhnolyzation, I came to understand, that Lukuss is inside my mind. It's a delusion that we have genes that no human being should have. I became free of all genes by having intercourse with Lukuss.' Ichise makes no effort to understand this, perhaps relating back to Ran's prophecy and Ichise's fear, the 'because I don't understand anything, will I destroy everything?' dilemma. He immediately decapitates Kano when he sees he has even texhnolyzed Ran into a Shape.

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[114] This becomes apparent when Ran asks for Onishii to kill her, communicating with him psychically through the city's obelisk, which is the object that somehow powers texhnolyzation

[115] For Ichise the journey allows him to make peace with his father, whom he sees as one of the many apparitions of the above-world who he once believed betrayed the people of Lukuss, but found out was framed. Even upon his return to the now deathly city, he encounters more guides. A Shape he encounters informs him that Lukuss is 'ninth annex of the reviving hell.' It is another riddle that is not explained.

The techno-shamanism that is apparent in these series derives itself from the natural and the technolized worlds, using them to form a spiritual amalgam. This often entails elaborate surreal worlds, especially of the cyberpunk variety and its descendents, where civilization has regressed or become abstracted. This all relates to a form of primalism, in which the spiritual element becomes a psycho-analytical tool for self-discovery through entities that confound their characters with riddles and puzzles. These spirit guides challenge the self via a hybrid medium of technology and religious experience. For some however such a hybrid is grotesque, the quest for knowledge and enlightenment seen only as a quest for human omnipotence. Thus the god and the monster become another hybrid in Anime, held in a schizo-spiritual stasis, a dualist blend of morbidity and divinity.

4.6 Gods and Monsters of Technology, Creators and Destroyers

This technological god and monster is another hybrid concept linked with deification which situates itself as the definitive symbol and goal of technological aspirations and endeavours.

The monster is the most easily distinguishable in Anime, and the most straightforward to visually represent, as it is the embodiment of destruction. Many non-deified AI are also given this treatment, such as the hybrids in *Blue Submarine No. 6* (1998).[116] Cybernetic and biological AI are not themselves deities but instead refer to humanity's new status as deity in its accomplishment of creating new life. Primarily they fulfil the role of a monstrous creation of a humanity experimenting with its heretical divinity. One recent example is the re-imagination of the Count in *Gankutsuou: the Count of Monte Christo* (2004) as demonically possessed victim. The demon, Gankutsuou is a classic Machiavellian devil, bartering with the fulfilment of mortal desire in return for a soul, in this case a persecuted individual's revenge. The monster of technology became once again exceedingly evident in 2006 in the form of *Ergo Proxy* (2006). Again the deified persona of technology is present but has been made even more explicit in this

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[116] The same can be said be said for cyberization, that the machines often appear as monsters is significant as well, and is present in much of Anime in the nineteen eighties and nineties, such as *Bubblegum Crisis: Tokyo 2040*; even the Evangelions have a grotesque appearance, so much so the series protagonist, Shinji, screams when he first sees the true face of the machine he pilots.

series, along with its other mythical and fantastical elements. The Proxies are monstrous deities in the truest sense of the term.[117] All are cunningly manipulative, and some, similar to the Angels in *Evangelion* (1995)*,* are capable of penetrating the psyche, even of other Proxies, in attempts to drive their victims to insanity and despair.

The Proxy: The monster of technology

Ergo Proxy, 2006, Shukou Murase, Manglobe, 575mins

But the Proxies are also creators, gods as well as monsters. And this is the flip-side of a primordial theme of creation and destruction that is embodied in sci-fi Anime by such deities. The Proxies are creators of the Domes and the humans and autoreivs within them. Without their presence the cities fall into ruin. But the Proxies for all their power are in turn created by humanity, a species that actually has no care for them, both those that have created them, and those the Proxies have in turn created. There is a mutual dissatisfaction between humanity and the gods they have created.[118] The Proxies are an interim throwaway tool, unloved and undesired but necessary.[119] Several of the Proxies voice their melancholy and their justification for destroying their creations:

> I thought if I pretended to be someone else I could be loved. But after a while I realised, the person they loved wasn't me. I am no one; therefore I am loved by no one. And so I decided to end myself. But even if we want to end

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[117] Akin as they are to the angels of *Evangelion,* in the sense they can take any form, from a Victorian gentleman to a lumbering beast to a parody of Walt Disney or even a game show host, others mimic the appearances of whoever is before them.

[118] Another foray into Tatsumi's Overlord theory of superior ability and inferior status.

[119] This knowledge has driven many of them of them to destroy their creations out of bitterness.

ourselves we can't, so we ended the others, for in them we found reflections of ourselves.

The way Proxies are portrayed, speaks multitudes about collective human ego in the series, where even gods are a disposable resource. This is a continued trend and is also seen in *Evangelion* (1995) with the deities of Adam and Lilith, the respective gods of the Angels and humanity. The organisation NERV crucifies and imprisons Lilith in the lowest levels of the geo-front and also awakens Adam, which sets off Second Impact, the apocalypse of the series. It is an attempt to enslave both deities for human ends, specifically the Human Instrumentality Project and the recreation of the tree of life and the tree of knowledge, to allow humanity to become a perfect being. SEELE, NERV's parent company believes that Adam and the angels are of the tree of life, and are thus immortal, while Lilith and humanity are of the tree of knowledge. So both humanity and the angels require the god of the other into order become a Supreme Being. Humanity is eventually the species that pulls it off, but the alternate film ending of the series implies that the reward is to be turned into a primordial soup, a collective consciousness, immortal and all knowing. Anime treats this result as being entirely ambiguous, as effectively all boundaries, all barriers have been broken, there is no division between self and other, no life and no death. This seems similar to the problem the Theo-normal have encountered in *Texhnolyze* (2003). Having perfected their genes through technological processes they have wound up effectively immortal, but not really alive or dead. The world is nothing more than ethereal to them, and they are slowly fading away. The overall implication of these texts seems to be that divinity is unfulfilling, abstract at best, that with the ability to do anything, nothing is at stake; there is neither risk nor potential.[120]

Becoming a god is seen in several sci-fi Anime as also replacing god. As has been described the process involves humanity either creating its own new deities or deifying itself. This alludes to another Old Testament story that Anime has a history of utilizing which Bird describes:

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[120] Though the eventual goal of technological development may be deification, the human experience of it in Anime is little more than a conceptual blur between destruction of evolution, see Chapter 2, section 2: The Stagnation of Human Evolution and its Inevitable Extinction.

In the Judeo-Christian tradition, the tower of Babel came to represent man's hubris, his attempt to ascend to the level of God. Hence it supplied an apt metaphor for modernity, when man did really lay claim to godlike powers, pushed God aside and proclaimed him dead, only to discover that human works did not prove sufficient replacement for divinity (Bird, 2008, p. 131).

Thus the stories of such sci-fi Anime re-enact what is perceived as a foolish endeavour, even if god does not actually seem to be present in the first place. The Sci-fi Anime texts of this study have instead become a cautionary tale against overreaching, especially in regard to AI and biotechnology, rather than offending an omnipresent godhead. Bird cites the various *Metropolis* (2001) incarnations in regard to this. "The entire metropolis has the potential to transform into a killing field, into a closed space in which aliens must be separated out and destroyed. In its disavowal of the hybridity of its structures, this model of modernity ultimately turns to self-destruction in an effort to overcome itself" (Bird, 2008, p. 131). The metaphorical Tower of Babel makes an iconic global symbol for technological caution, lest humanity should have to resort to genocide in order to undo a particular technology that has already become embedded.

To this end, the Transhumanist belief and theory at least, attests that technological development should pertain to ethical standards, to which Hughes cites Mark Walker in 'Becoming Gods': "That the goal of human enhancement should be moral as mental and corporeal perfection" (Hughes, 2004, pp. 256-257). That is, that the genetic engineering of humanity should aspire to some 'greater good', for the betterment of all humanity or some similar sentiment. 'Should', but Walker's is a suggestion, not a pledge. A criticism that is levelled at libertarian values is that they preach human rights but are out of touch with reality due to their lack of accountability for the consequences of such freedoms. Technological development does pose risk as (nuclear energy for example has proven) and optimism and morality are entirely insufficient to avert disasters. A world without limitations; the totally malleable body, and the continually expanding mind, are both part of the illustrious dreams of immortality and deification which still remains an ultimate goal kept secretly on the peripheral of human consciousness. Sci-fi Anime shifts the immortal creature into salience and confronts its audience with questions about a mode of existence; its exclusivity, its role as guardian and/or dictator, and whether any empathy

for the mortals will remain. Several sci-fi Anime question how a human would manage divinity, and more importantly, what if there were to exist more than one? A society of multiple gods sounds messy, mostly because a relatively brief overview of human history details innumerable wars between cultures that worshipped different gods which still continues today. The Anime narratives analysed in this project which include multiple technolyzed deities in a society (or those who aspire to deification at least), usually result in the desire of mutual annihilation, not all that dissimilar from ancient pantheons of gods from which Anime draws many of its apocalyptic symbols and influence. So the question following these thoughts is now which of the following is more disturbing: Humanity becoming divided into Gods and Dolls, or an attempt to deify all humanity, possibly into a collective entity?[121]

The invariable conclusion Anime comes to, is that human-gods will destroy each other as their individual desires, spurred by technologically divine powers, conflict with each other. Or if they exist singly that they will bear no sympathy for the human species and will seek its destruction.[122] That such entities in sci-fi Anime represent new or alternative life-forms emerging in human society, yet resemble 'old world monsters' and demons, is referential to the ideological opposition that is occurring regarding the ethics of such technology. This is the same struggle that was detailed at the very beginning, between the forces of Homeostasis and Transistasis, between chaos and inertia.

The amalgamation of biotechnology and AI with deity and spiritualism form all manner of questions in the Anime medium of a how a multitude of very different creatures may or may not coexist on the Earth and even beyond. It also entails the possibility of permanent effect being wrought on humanity itself and its environment. The potentials and dangers of humanity's technological drive are becoming more and more apparent, and the ideologies that Anime portrays have many counterparts in real-world society which are divided on many moral and ethical issues. Out of convenience this study has

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[121] *Ghost in the Shell 2: Innocence* deals explicitly with the concept of individuality splintering into a relationship between gods and dolls and suggests that happiness can only be fulfilled through one of these two modes, not the mismatch of multiple individual gods or at least egos, which is the cause of all hatred and anguish.

[122] The Nobles in *Wolf's Rain* are examples of this, as are the Proxies in *Ergo Proxy*, the Class and the Theo-normal in *Texhnolyze*, the Count in *Gankutsuou*, Enkidu in *Gilgamesh*, and that's just the last decade, the list goes on.

taken to divide them into Transhumanists and bioLuddites, and they present the two most cohesive generalized views of how technology should and should not be used. Hughes argues that "[p]erhaps we are better off yucky but complicated than in the clean, well-lit spaces of the illusory safety of a 'nature' that doesn't really exist" (Hughes, 2004, p. 63). As opposed to the alternative belief that Hughes cites in another critic: "We all need to accept he says "that as a species we are good enough. Not perfect, but not in need of drastic redesign. We need to accept certain imperfections in return for certain satisfactions. We don't need to go post-human" (Hughes, 2004, p. 115). No doubt these are debates that will continue many years hence, which I hope will continue to be reflected upon and critiqued in sci-fi narratives, be it in Anime or elsewhere.

<u>Conclusion</u>

Before considering the conclusions that can been drawn regarding this study of Anime's portrayal of humanity and technology in the genre of science fiction, there are several limitations to my perspective of these texts and their analysis that must be taken into account. These can be divided into two groups, one which relates to the epoch and section that I have selected for critique and the other relates to the cultural and national specificity of these texts.

As was mentioned at the very beginning, sci-fi Anime is part of a much wider genre with a long history of development, and a diversity that would be impossible to grasp within the scope of such a small project. There are a vast number of authors, writers, directors and other auteurs from all over the world who over a period of more than a hundred years have produced texts across all manner of mediums from print to television who have contributed to the genre. Anime too has a long history and a unique take on science fiction that has developed over several decades, being both influenced by and influencing auteurs from other nations. This mutual referencing is particularly strong between America and Japan, due largely to the post-World War II American occupation of Japan. Nonetheless between the history of science fiction and its Anime counterpart, the most recent epoch of sci-fi Anime is the one that has been chosen as the subject of interest, and of it, only those texts that had the most cohesive and similar concerns and themes. There are a multitude of other texts that are relevant to this subject that could simply not be included due to the limits of this project, which is almost overflowing as it is. It should also be stated that sci-fi is continuing to evolve as a genre, Anime included. The word 'excursion' was used by Bolton to describe the progression of science fiction and social theory and that is how this study should be considered in relation to sci-fi Anime, as an examination of one stage of the continuum of a genre within a medium.

My own particular cultural perspective needs also to be taken into account in regarding my analysis of this genre within a medium in a specific time period. Anime is ultimately a Japanese cultural export, not specifically targeting audiences outside Japan, although it has found several niches abroad. Without a doubt there will be intricacies and subtleties to these texts, no matter their wide appeal and Western influences, which a

non-Japanese will not pick up on or not properly comprehend. I researched what I thought was relevant to the sci-fi themes that were being presented and other symbolic Anime conventions, but in studying this subject from an alien perspective there are surely large gaps in my knowledge, and aspects of these texts that I may have interpreted in an alternative way to that which was intended by the creators.

From the research I have done on sci-fi Anime from this epoch however, there are archetypal ideologies that can be collectively identified across multiple texts, some of which are part of a continuum of sci-fi Anime conventions and themes, others that offer reinterpretations or introduce new themes or concepts. By arraying these recurring aspects we can affirm what the texts of this genre, medium and time period are stating in regard to humanity's tenuous relationship with technology.

As has been argued throughout, these texts present themselves not merely as literary fantasies regarding what has been referred to as the nuclear sublime, cathartic destruction and visual excess, otherwise termed in this as study the apocalyptic mode. Although the visual spectacle and fantastical elements are the most immediately compelling, Anime draws much of its inspiration from both actual technologies in use and in development, and from the philosophies and attitudes of various individuals and organisations who possess many varying views on technological advances. This has become a defining element of sci-fi Anime post-millennium, superseding even the spectacular apocalypse which has been downplayed in recent years.

These divisive views have been simplified by some academics into the concepts of bioLudditism and Transhumanism. While limited in this way, it represents the real debates that are occurring regarding modern technologies including bionics, mechanization, and artificial intelligence, but more verbosely with the various forms of biotechnology and genetic engineering. What has become most apparent in these debates is the renewed vigour of Judeo-Christian religions[123] with distinct and strict moralities regarding such technology. Post-millennial sci-fi Anime has embraced this and this is most evident in its in-depth themes of mythology, theology and spiritualism. Judeo-Christian scripture and symbology have been particularly apparent in sci-fi Anime for

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[123] For that matter, the Arbahamic religions as a whole are experiencing growth.

several decades, largely due to the apocalypse in the Book of Revelations which equates itself so easily and simultaneously to both sci-fi dystopias and the search for knowledge that technology represents. Sci-fi Anime of the new millennium is as much about the threat and potential of technology as it is about the engaging of religious and spiritual belief with the theories of science of technology. Manga legend Masamune has even surmised, and many Anime texts suggest this as well, that the integration of science and religion could be the most important element of the debate on humanity's technological and social development as a species.

The threat of impending apocalypse is one of the most notable aspects of sci-fi Anime and is an indulgence in the ultimate fear surrounding issues of technology. In science fiction as a whole there is an ingrained concept that humanity's biochemical and various other endeavours will inevitably result in a devastating catastrophe. However there is a silver lining to this archetype. For many years now the medium has connected the theme of apocalypse with evolution, subverting the need to curtail and control technology with the concept of inevitable change. While this is reminiscent of BioLudditism and Transhumanism, apocalypse and evolution can also be equated with Homeostasis and Transistasis[124] respectively, what has otherwise been termed in this thesis as Chaos and Inertia. Homeostasis equates to dystopian fears of runaway technology, symptomatic of human desires and aspirations which is arrayed against seemingly inevitable changes and natural processes of evolution that Transistasis pertains to. This presents the apocalypse not as an ending, but as a natural ongoing process of interaction between humanity, its societies, cultures and technologies, with the wider world of nature and physics. Several post-millennial sci-fi Anime suggests that this anxiety is largely due to an overwhelming fear of the unknown. In this way, the apocalypse, as has been described in *Texhnolyze* (2003), *Wolf's Rain* (2004), *Ergo Proxy* (2006) and others can be read as the embodiment of trepidation regarding the encroachment of technology on humanity and its surroundings, and how people will define themselves and navigate new and unfamiliar environments.

The most consistent view that Anime from this study presents in regard to this, is that humanity's new augmented form is ambiguous at best. The post-millennial sci-fi

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[124] Which the infamous *Neon Genesis Evangelion* made use of. See Chapter 1.

Anime used in this study have continued the trend of the popularised 1990s texts. *Ghost in the Shell* (1995), *Neon Genesis Evangelion* (1995) and *Serial Experiments: Lain* (1998), all portray of humanity's governing forces, and/or humanity as a whole, as lacking in maturity and responsibility in its handling of technological endeavours which are often focused on immediate material gain, lacking thorough planning and investigating as well as foresight. Some texts represent this as a follow on from nuclear technology, its use as an alternative fuel source and its utilization as a weapon of mass destruction, such as in *Ergo Proxy* (2006) where the alternative energy source also results in mass extinction. More specifically, several post-millennial sci-fi Anime retain the presence of callous and uncaring secretive councils and government agencies that are consumed with their own ambiguous goals. Often large sections of humanity serve as sacrificial lambs for what these ruling forces tout as necessary for human evolution, but usually mask more malicious and egotistical intentions, such as the opening of Paradise in *Wolf's Rain* (2004). The overall message that can be gleaned in such texts is that military and government organisations are corrupt and inhumane.

The dystopian attitude in sci-fi Anime is a worldview that transcends that of just technology, what is essentially humanity's tools, and relates to another well established and more inclusive Anime archetype; the natural human proclivity towards conflict. Over the last decade, even technology in all forms, cyberization, AI, biotechnology and its hybrids, has come off second as an instigator of human conflict. More often it is the divisive nature of humanity itself, in their irresolvable and hateful factions, which are portrayed as being truly threatening to the survival of humanity in the future. This is most explicitly seen in *Texhnolyze* (2003) in its ideologically opposed factions whose battles culminate in the extinction of human life in Lukuss. This presents the dystopian concept that humanity as a whole will not be able to reconcile itself with its new technologically altered shape and will thus destroy itself in an effort to prevail.

This is often relatable to the fact that the next species to occur in evolution might not be human at all. This can be seen in any sci-fi Anime which includes AI, which has become a well-established hybrid representation of cyberization and biotechnology. The prospect of such an occurrence is most-often seen as a moral and legal headache as it disrupts the establishment of human rights, separating out for the first time the previously

entwined concepts of human and person. Such a premise is doubly complicated because the occurrence of such awakenings/birthing of AI is most often in objects of commodity, items with heavy monetary worth. The process of an object passing from the status of object to person is the most contentious issue and it has driven the cyberpunk narrative for decades now. Cyberpunk Anime endorses the belief that if AI were ever to occur, it will result in conflict resulting in either the destruction of the AI or the species that created it. But while the cyberpunk technologies offer the potential for new states of being through bionics and digital spaces, no other technology offers the potential for innumerable changes to the human body more than biotechnology.

Genetic engineering represents the latest threat which has become popularised in Anime and it is defined by the prospect of permanent alterations that may be made to the genetic make-up of humanity which would see a new superior species arise. Biotechnology is specifically relatable to another Anime trend; the re-emergence of fantasy as a popular genre which has even effected science fiction. One argument that has been put forward as to why sci-fi has embodied this through biotechnology, is that genetic engineering, inter-species technology and the cyberized hybrid; nanotechnology, represent the supernatural status that biotechnology has attained in science fiction, especially in Anime.[125] Through manipulation of the genome, the notion of creating humans, plants and animals that are stronger, faster, smarter, more resilient to disease and longer-lived is making the concept of the Post-human seem closer to becoming a reality. Biotechnology in Anime has become an amalgamated embodiment of both a post-modern Tower of Babel and of the eternal Class Struggle, which sees the prospect of Post-humans as an expression of elitism and individualistic wealth and power. Small wonder then is the technology's attribution to human quests for immortality and deification so explicitly seen in Anime such as *Wolf's Rain* (2004) and *Ergo Proxy* (2006).

The quest for immortality and deification is the last dominant archetype that needs to be addressed. The use of technology to either create a god or to deify a human is perhaps the most fantastical aspect of post-millennial sci-fi Anime. It is also perhaps the most pertinent means of commentary regarding the human desire for betterment that is at

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[125] It is also representative of an elegiac trend in Anime, a romanticizing of the past in response to the tumultuous times of the present, of which technology's inability to solve problems and improve life has been crucial. This is reflected in much of post-cyberpunk, steampunk and retro-science fiction.

the heart of all technological projects. This trope in Anime begs what is perhaps the most important question of technology; what is the final goal, or what is the end result? The answer that the Anime I have analysed suggests, is that the question itself is misleading, being based on a concept of beginnings and endings. Even in Apocalyptic Anime, being as entwined as it is with evolution, there is a sense given that nothing ever ends. Whether the world moves through cycles or along a forever-spanning linearity is variable, but even with the absence or deification of humanity, life goes on. Anime does however present the image of the artificial deity as a rather miserable existence, unfulfilling and meaningless, but then so is the perpetual struggle of meagre humans. It is for these reasons that the overall ideological conclusion that can be drawn from sci-fi Anime used in this study is that of 'ambiguity'. This one word captures the overall attitude that these texts exude in regard to the issues of humanity's relationship to technology and what the changes resulting from this relationship will mean.

The collective ideologies that the key texts and others present make for intriguing literature, but it is much of sci-fi's undertaking of allegorically detailing and referencing real world concerns regarding technology that has raised it above the status of pop-culture to that of a social critique. The better auteurs of sci-fi Anime make use of fiction and fantasy as a means to objectively present the differing social attitudes that exist and how they engage with each other and what their concerns are. The Anime analysed in this thesis were selected in accordance to their relevance to these concerns as they have evolved in the last decade.

In the post-millennial period of sci-fi Anime, it is the conflict between science and religion which is the most important real-world concern that is reflected. The advent of biotechnology, which has seen the prospect of creating superior species, and being closely linked issues of eugenics, has elicited a fervent moral outcry from Judeo-Christian and other religious organisations that sees the alteration of the body, specifically the ability to 'design' as an affront to their values and beliefs. However, while science can be seen as undermining the very validity of religion and theology, it is ironically at the same time proving itself impotent in the face of the very global concerns that spurred on renewed religious fervour, and the two camps remain locked in a struggle

for ideological authority. In the sci-fi Anime of this project, this has consistently been represented by science and technology existing side by with religion and spiritualism, and the two are often co-dependent or one in the same, such as can be seen in the amalgamation of the priest and the professor in characters such as Daedalus and Doc from *Ergo Proxy* (2006) and *Texhnolyze* (2003) respectively. This has led to the suggestion that at some point, the conflict between religious belief and scientific theory will have to be resolved, and that the most straightforward way, although perhaps the most arduous way as well, will be to amalgamate the two.

It is this and similar conflicts that are indicative of a change in attitude to technology, which post-millennial sci-fi Anime has also taken into account. This relates to the aforementioned paling of technological concerns in the face of differing irresolvable ideological groups, as well as the distribution of technological improvements. The conclusion that several authors and auteurs have put forward on this matter is that there will be three overall groups of people in the future, and this is probably true already. The first group will be those that accept technological enhancement and embrace the changes to society that come with it. The second will reject such alterations in favour of genetic 'human' purity. The third will be will be the poorer disenfranchised people who will not possess the resources to choose either way. *Wolf's Rain* (2004)'s portrayal of humans allegorically describes such a situation aptly. Such portrayals in Anime reflect the forecast of technology as being as closely tied with issues of class as it will be with socio-political and religious values. More than apocalyptic destruction, or a war against an artificially created species or entity, this seems a reasonable hypothesis. We should not forget however, that the monsters of sci-fi Anime are often intended as mirror images of humanity, creatures symptomatic of human nature and civilization. The most cohesive message that can be gleaned from the texts I have discussed is that humanity is its own worst enemy, and that technology is simply a tool, though it is a tool that has the potential to sculpt and redefine the traditional limits of the human definition, much to the fear and chagrin of many.

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