

Emancipation in postmodernity : political thought in Japanese science fiction animation

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7. TRANSHUMANITY AND HYBRIDITY IN APPLESEED

7.1. Introduction

With rapid developments in the technologies available for human enhancement, there has been not only a desire for expanding current human capacities but also a certain amount of fear about such possibilities. Scholars have debated the opportunities and risks of human enhancement, but advancements in different fields such as genetics, nanotechnology, and robotics mean that a more sophisticated debate on human enhancement is urgently required.⁷⁴ One contributor has been the philosopher Nicholas Ager, who argues against what he calls the *radical enhancement* or the augmentation and transformation of the intellectual and physical capacities of human beings well beyond that of ours today. In his book *Humanity's End: Why We Should Reject Radical Enhancement* (2010), Ager puts forward an argument of *species-relativism* on the premise that human beings as a biological species share certain experiences and ways of existing, which may not be valued by the members of another species, such as *radically enhanced beings* or posthumans.⁷⁵ Ager writes that "radical enhancement involves improving significant human attributes and abilities to levels that greatly exceed what is currently possible for human beings" (ibid., 1). He rejects this

⁷⁴ Ongoing debates in the field of bioethics, a subfield of applied ethics, have engaged not only with philosophical traditions but also with biological and medical sciences, computer science, law, history, sociology, anthropology and so forth. Bioethics address two basic questions: "what should individuals and human communities do, permit, tolerate, or prohibit in biology, particularly affecting existing and future human beings, and how decisions should be made to determine what conduct is mandatory, permissible, tolerable, or prohibited" (Lock, Last, and Lucas 2006). Multidisciplinary institutes and organizations such as the Future of Humanity Institute at the University of Oxford led by Nick Bostrom and Humanity+ are very influential to the current debate.

⁷⁵ *Posthuman (noun)* is defined as *transhuman* or "someone whose body or mind has been transformed (e.g. by cyborgization or genetic engineering) so greatly that they are no longer considered human, especially one who now possessed greater abilities than normal humans." (Prucher 2009, 248). Ager (2010, 17) also uses this term to refer to *radically enhanced beings* who are "not only significantly better than us in various ways, they are different from us – so different, in fact, that they do not deserve to be called human."

level of enhancement because it "alienates us from experiences that give meaning to our lives," essentially bringing about an end to humanity (Ager 2010, 179).

This chapter offers another example of how anime philosophizes by performing a thought experiment. Analyzing Aramaki Shinji's animated film *Appleseed* ([2004] 2005), this chapter shows how *Appleseed* challenges Nicholas Ager's argument of species-relativism and functions as a counterexample. Ager restricts the nature of human beings in a certain ways on the premise that humanity is a static, homogeneous category but *Appleseed* shows the contradictions of this through intriguing questions about what makes human beings *human* that arise from the visual narrative. As human beings have new experiences and gain new values with the development of new technologies, do the characteristics of humanity remain the same as they were before? What happens if posthumans do share experiences and values with humans? Is it still plausible to distinguish humans from posthumans as different species? The later section demonstrates that *Appleseed* not only shows the limitations of Ager's philosophical argument, but also offers a political strategy that envisages hybridity as a form of emancipation from human essentialism.

7.2. Ager's Species-Relativism and its Problematics

In order to begin a series of philosophical discussions on radical enhancement, Ager (2010, 19) sets a rather simple biological definition of humanity as "members of the biological species *Homo sapiens*." Drawing from biologist Ernst Mayr's definition, he sees a biological species as "a group of populations whose members are capable of interbreeding successfully and are reproductively isolated from other groups" (ibid.). Appealing to nature, Ager treats human nature as "constituted by the large cluster of traits by which one human recognizes another creature as an appropriate mate either for him or herself, or for a sibling or child" (ibid., 20). He argues that those traits are crucial to distinguish humans from other groups including radically enhanced beings or posthumans.

Ager argues for an idea of species-relativism on the premise that "certain experiences and ways of existing properly valued by members of one species may lack value for the members of another species" (ibid., 12). He believes that once various radical enhancement technologies are available and applied to human individuals, they will become much smarter, stronger and live longer to the extent that this new group of people may no longer share the same experiences and values as those of humans. Those experiences and values include aesthetic and emotional sensitivities, love, pleasure, fear, pain, suffering and death. Ager thinks that some of these human experiences and values are closely tied to the limits of human beings and are valuable because they consequently create "psychological commonalities that make humanity as a single biological

species" (ibid., 15). He thinks that a significant difference between humans and posthumans (or, in his terms, the unenhanced and the radically enhanced beings) is likely to turn the two groups into different species, eventually creating reproductive barriers between them and the barriers would endanger the continuity of humanity as a biological species. In other words, Ager's major objection to radical enhancement is that there is no evidence that radically enhanced people would share any of our human experiences or values. In his darker scenario, radically enhanced beings will not interbreed with the unenhanced; unenhanced parents may have difficulty recognizing their radically enhanced children as their offspring. Ager sees as the potential cost of radical enhancement the very existence of humanity itself and calls for its rejection as a necessary precautionary approach. Ager's arguments, based on a species-relativist view, have some challenges to answer. I would like to raise two points: one is his problematic focus on biology alone, and the other is the denial of the possibility of hybridity between the unenhanced and the enhanced beings.

Using a biological definition of humanity as members of a biological species, Ager argues for species-relativism – some human experiences and ways of existing properly valued by humanity may lack value for the member of other species such as transhumans – and on this basis proposes that we should reject the level of enhancement which would create transhumans. This implies that there are some values that are specific to human species, and that they exist independently of social, cultural and historical grounds.

Indeed, Ager (2010, 13) argues that species-relativism is better than cultural relativism because the importance of a boundary between species is greater than that of boundary between cultures, and that species-relativism can also avoid the long-lasting nature-nurture debate.⁷⁶ Thus, Ager does not deal with the diversity of experiences that human individuals would count as valuable, meaningful and pleasurable as a result of the social and cultural backgrounds of individual human beings. And yet is humanity as a species so homogeneous that our experiences and values are static? Moreover, could we so clearly distinguish biological/scientific notions of species from cultural and social ones when discussing morality and value?

As Robert Young (1995) suggests, scientific, social, and cultural debates on race and species were highly interconnected in Victorian colonial discourses on racial theories and associated moral issues around hybridity. In his book *Colonial Desire*, Young illustrates how different categorizations of humans such in terms of species, race, and type in biological racial theories were displaced into social theories and used throughout the nineteenth century to construct various socio-racial discourses that included views about morality.

⁷⁶ The *nature-nurture debate* refers to "the controversy over the relative importance of heredity (nature) and environment (nurture) in the causation of human behaviour" (J. Scott 2014).

Young offers a genealogy of the term hybridity from nineteenth century colonial discourse of racial theory, incorporating fields from linguistics to the cultural criticism of postcolonial studies. He discusses how the question of whether or not human beings were a single species became one of the central issues in the anthropological, cultural and scientific debates among the Victorian extreme right in the nineteenth century. Young (1995) argues that hybridity was a key concept in these debates, and although there were various different discussions around the issues, the term was employed in discourses that identified different races with different species (ibid., 10). The categorization and separation of races was naturalized and created an immutable boundary between the colonizer and the colonized (typically white Europeans and the racial Others). This separation was based on a biological analogy, with different races supposedly unable to intermingle and sexually reproduce with each other. Under this assumption of race, theories of polygenism claim that humans are several different species. This kind of view is found in slave-owner Edward Long's influential book History of Jamaica (1774) and later gained widespread currency in scientific fields (Young 1995, 150-151). These claims deny the possibility of racial hybridity or inter-mixing between races. Yet at the same time, intermingling did exist and was observed widely in South and Central America, with some scholars including ethnologist J.C. Prichard arguing for human beings as a single species (ibid., 10-11). Others, including Josiah Nott and George Gliddon in their racial theory developed its relation to Egyptian cultural artifacts, French surgeon and anthropologist Pierre Paul Broca, British naturalist Charles Darwin in his later writing, and British philosopher and sociologist Herbert Spencer, argued for a single species with different types that could be distinguished in various ways, such as *proximate* and *distance* types (ibid., 11-19). Young notes that

The question is whether the old essentializing categories of cultural identity, or of race, were really so essentialized, or have been retrospectively constructed as more fixed than they were. When we look at the texts of racial theory, we find that they are in fact contradictory, disruptive and already deconstructed. Hybridity here is a key term in that wherever it emerges it suggests that impossibility of essentialism. (ibid., 27)

Young's close analysis of the Victorian texts and their context reveals such a contradiction. For example, in the chapter "Culture and the History of Difference" Young illustrates how the writings of leading intellectuals including John Locke, Adam Smith, J.S. Mill, and E.B. Tylor, have significantly constructed ideas of civilization and culture under the discourse of the Enlightenment and modernity. Young points out that among these works, Arnold's influential work *Culture and Anarchy* (1869) not only operated at a conceptual level to construct an idea of Englishness centered around civilization, high culture and modernity but was also influential at the material and institutional levels: examples include the foundation of a compulsory national education system, the

construction of cultural and educational institutions such as public museums, private universities, public schools and so on (Young 1995, 51–52). Indeed, as Young reminds us, "race has always been culturally constructed. Culture has always been racially constructed" (ibid., 54).

Thus considering Young's study, it would be questionable to discuss morality and values purely based on a scientific or biological definition of species. Ager's species-relativist approach for discussing morality and values based on biological and philosophical grounds would be problematic because moral values are not entirely free from social and cultural aspects.

Ager clearly distinguishes his stance of species-relativism from *speciesism* over issues of morality. Speciesism is broadly defined as a belief in the superiority of one species, typically humans, over all other species such as nonhuman animals. It often accompanies an assumption that the interest of one species justifies indifference to the lives, dignity, rights or needs of all others.

The term *speciesism* was coined by British psychologist Richard Ryder in the 1970s and widely discussed by critics and scholars including the moral philosopher Peter Singer (Buchanan 2010a). In Singer's (1990, 6) words, speciesism is "a prejudice or attitude of bias in favor of the interests of members of one's own species and against those of members of other species." Based on the utilitarian school of moral philosophy, Singer writes that "*The principle of the equality of human beings is not a description of an alleged actual equality among humans: it is a prescription of how we would treat human beings*" (ibid., 5, emphasis in the original). Comparing speciesism with racism and sexism, Singer further argues that "the basic principle of equality" – the principle of equal consideration of interests – "must be extended to all beings, black or white, masculine or feminine, human or nonhuman [nonhuman animals]" (ibid.).

All these beliefs (i.e. speciesism, racism and sexism) allege inherent difference between groups of peoples or species and often claim one group's intrinsic superiority over other groups, devaluating their characteristics and capacities. According to Ager (2010), species-relativism neither claims such moral significance nor alleges the superiority of humanity over other species. However, there are two things common between speciesism and species-relativism.

Firstly, both beliefs are premised on an immutable boundary between humans and nonhumans (i.e. nonhuman animals, posthumans), categorizing and separating different species and treating humanity as a single homogenous group. Secondly, and related to the first point, both speciesists and species-relativists do not discuss much about the possibilities of hybridity of humans and they are reluctant to make changes to human characteristics and capacities. According to Ager, psychological factors would influence biological characteristics and capacities. Although Ager does not discuss other factors, most obviously social and cultural ones, these aspects and experiences may also interact with psychological and biological factors and lead to some value judgment.

So what happens if humans and posthumans could share some experiences and values? If posthumans are designed to do so, or if humans are influenced by posthumans, would the common

experiences and values not create something not authentically human or posthuman? Because of this new ground, it would be very difficult to claim which experiences and values belong exclusively to the human species. Moreover, even if species-relativists insist that some experiences and values are exclusively human ones, there is no evidence that the radically enhanced beings or posthumans would not share any of our human experiences and values especially if the two groups have cultural, social or psychological commonalities.

In order to consider these questions, it is worth examining *Appleseed*'s visual narrative closely, because *Appleseed* deals with these questions in very sophisticated and lively ways. The next section analyzes *Appleseed* and shows how the anime performs a thought experiment as a counterexample to species-relativism. I argue that *Appleseed* allows the viewers to question Ager's argument and the human essentialism it rests on, and shows that the philosophical argument does not hold up and must be rejected.

7.3. Thought Experiment: Comparing Two Visions of Posthuman Society

Appleseed is a science fictional animation from 2004, based on Shirow Masamune's manga, and directed by Aramaki Shinji.⁷⁷ *Appleseed* is an interesting case with which to rethink Ager's species-relativism, and his essentialistic understanding of human beings, because it deals with issues such as the possibilities of shared value among human and posthuman citizens and posthuman subjectivity. In the story, the concept of citizenship is extended to posthumans and all citizens are expected to respect and share human-centered moral values.

Set in the twenty-second century in the aftermath of a global war, human scientists and engineers have built a utopian city named *Olympus*. There, scientists developed a genetically-engineered species called the *bioroid* using the best genes of humans, and this new species comprises half of the population. Bioroids are designed to create a peaceful society and their capacities are radically modified for this purpose. For example, bioroids are less emotional in order to prevent conflicts among humans; they have much shorter lifespans; and they do not have reproductive capabilities so that they do not become a threat to humans. Their every behavior is strictly monitored by the central artificial intelligence (AI) called *Gaia*. Due to these restricted

⁷⁷ *Appleseed* has been adapted into animation several times: OVA *Appleseed* (Katayama 1988), Aramaki Shinji's three feature films, *Appleseed* (2004), *Appleseed Ex Machina* (2007), and *Appleseed Alpha* (2014), and a thirteen-episode series *Appleseed XIII* (Hamana 2011).

features, bioroids are strictly distinguished from humans. Some believe that bioroids are a threat to humans, whereas others believe that humans themselves are becoming a threat to the harmonious society in which they live.

Appleseed offers two visions of future society, namely *anthropocentrism* (i.e. the humancentered view) and an attempt to transcend anthropocentrism. Over the course of story, the protagonist rejects essentialism (both human essentialism and posthuman essentialism) and envisages an alternative to human-centered society. The following section looks at these two visions through the various aspects of the visual narrative.

7.3.1. Vision 1: Anthropocentrism and its Limitations

The city Olympus is an anthropocentric human-posthuman society. The technology and social and political arrangements in the city are all designed to give priority to humans. Although anthropocentrism sounds similar to speciesist views, there is no critical tone in the narrative in *Appleseed* at the beginning. The construction of Olympus is seen as the last hope for humanity to survive after the apocalypse, and *Appleseed* depicts Olympus as a solution to prevent humans from self-destructive wars by having them live alongside posthuman bioroids. Like some classic utopian narratives, *Appleseed* juxtaposes two different spaces, in this case the bloody battlefield and the newly constructed city, and uses the viewpoint of a visitor to Utopia, Deunan and her navigator, Hitomi to illustrate a huge gap between these spaces. Deunan is the protagonist and a highly skilled human soldier, while Hitomi is a bioroid who works for the Olympus government and her job is to recruit elite soldiers from other places.

The opening scene shows Deunan first engaging in an intense battle against unknown enemies, and then follows it up with her capture and transport to the utopian Olympus. This creates a significant visual contrast between two different spaces in the opening scenes. Using 3-D computer generated imagery (3-D CGI) and motion capture technology⁷⁸ *Appleseed* offers the viewer a series of dynamic action scenes in photorealistic three-dimensional spaces. It gives the viewer the experience of moving around in these spaces, yet the use of anime-like rendering and shading for the human characters provides a startling contrast.

⁷⁸ Motion capture is defined as follows: "In digital film and video, a means of recording an actor's movements and facial expressions so that they can be mapped onto a computer-generated character. An actor performs in the role of the character while wearing a leotard covered in motion detecting sensors" (Chandler and Munday 2011).

This heterogeneity of image styles – the combination of a photorealistic background with more graphical, flatter, black-ink outlined characters – is perhaps nothing new. This hybrid style can be found in earlier cel animation works by Disney and Toei Animation already and many other contemporary works today. The arrival of digital technologies in the 1990s had a great impact on animation production both in Hollywood and Japan, but many Japanese animation works maintain visual styles of 2-D cel animation-like characters such as relative flatness, stylized shading and black-ink outlines, and integrate these characters into 3-D imagery space, using enhanced digital technologies more than their Hollywood counterparts.⁷⁹ Indeed, this kind of heterogeneity of image styles has become one of the most prominent characteristics of Japanese animation today. As Steinberg (2012b, 4) notes, "contemporary Japanese animation is best characterized as a hybrid form that includes both cel-style and 3-D animation. Indeed, the hybrid use of animation technologies and styles itself became a subject of reflection in anime from 2000s." Tsugata (2011b) also suggests that recent animation technologies have been developed to look for a way to reduce or resolve a sense of gap or discomfort when cel-style 2-D characters act in 3-D CGI spaces.

The opening scene is a good example of how the different visual styles combine with the dynamic of photo-realistic backgrounds. Like a number of 3-D computer generated animation films such as *Final Fantasy VII: Advent Children* (2005), *Ghost in the Shell 2: Innocence* (2004), and *The Sky Crawlers* (2008), *Appleseed* also introduces "a moving synthetic image" to create lively movements and visual qualities with 3-D CGI and gives the viewer "an experience of moving around the simulated three-dimensional space – something one can't do with a painting" (Manovich 1997, 6) as if the viewer is fighting in the battlefield or approaching a city with an aircraft. The moving mechanic devices, weapons and aircraft are shot from various different angles with a mobile "camera," giving the viewer a sense of simulated realism in the battle. Slow-motion scenes, which are very difficult to draw in traditional cel animation, are used effectively to portray Deunan's actions. An upbeat soundtrack accompanies the visual images, giving rise to a feeling of excitement and tension in these battle scenes. There are entire scenes depicted in the dark, but effective use of lighting creates a sense of depth.

I am not claiming that traditional 2D cel animation cannot create such movement. Indeed, there are a number of beautiful scenes produced in earlier animations in 2D such as flying scenes in *Castle in the Sky* (1986), bike scenes in *Akira* (1988), or flying scenes in the more recent animated

⁷⁹ As digital technologies have become available in animation productions since the 1990s, major Hollywood animation studios such as Pixar and Dreamworks have explored the quality and creative diversity of 3-D CGI in their works such as Pixar's *Toy Story* (1995), *A Bug's Life* (1998), and Dreamworks' *ANTZ* (1998). *Toy Story* 2 (1999) has increased the visual sophistication of computer-generated environments, especially in terms of the human characters (Kerlow 2004, 26).

TV series *Eureka Seven* (2005), among others. However, the 3-D CGI in *Appleseed* offers a different kind of visual quality for capturing a sense of motion and achieving dynamic movement through the character's actions and perspective from the moving vehicle.



Figure 24 Two spaces: battlefield (left) and Olympus (right). Screen capture from Appleseed.

Following the battle scenes, the aircraft brings Deunan to the city of Olympus. The glimmering city appears through the clouds accompanied by upbeat music. The aircraft gradually approaches the city with a dynamic bird's eye view, where a futuristic cityscape is shot from various angles and gives a viewer a sense of seeing the city from the air. Again, effective camera angles showcase the dynamics of the city. As CG director Ohtsuka Yasuhiro notes, "We [animators] also needed to pay attention to the background. Since the camera could move freely in three dimensions, which is one of the great advantages of 3D, we were able to work amazing details into the background artwork" (*The Birth of 3D Live Anime* 2005, 00:10:13–00:10:30).

When Deunan arrives at Olympus the following day, the navigator Hitomi shows her around and gives a brief history of the city. Deunan is amazed at the new world that she is witnessing and says, "Considering where I was yesterday, it looks like an illusion" (00:22:38). The background and scenery offers an effective visual contrast between the two different spaces: the battlefield and the utopian city.

Although all *Appleseed* series of manga and animation mention the global war and Olympus in the opening, it is *Appleseed* ([2004] 2005) that most vividly and visually presents the contrast of two different spaces – the ruins and the utopian city – compared to the other *Appleseed* series.

Shirow Masamune's Original manga ([1985-1989] 2001) explains the global war in the opening page and illustrates the ruin with a two-page spread. In the following page Deunan is cooking dinner and waiting for her cyborg lover Briareos to come back, which brings a comic element to the setting.⁸⁰

⁸⁰ Although my analysis in this chapter focuses on the difference in species, not that in gender, I would like to point out Deunan's role is gendered – a women preparing dinner and waiting for her lover to come home – in this apparently comic scene.

The opening scene of 1988 OVA begins with Olympus and later also explains more about the war, the construction of the utopian city and its citizen bioroids, in comparison with the manga's use of written text. It says

In the aftermath of World War 3 a group known as General Management Control Office formed in order to rebuild and unify the ruined world. They constructed an experimental model city; it was named Olympus. The new city was a sanctuary for surviving humanity. It was also home to a new sub species – half human, half robot beings called bioroids. The bioroids were responsible for all aspects of administration. This experimental city was meant to finally represent all of mankind's utopian dreams, dreams which underestimated the eternal human desire for absolute freedom. A freedom which for some was still to be gained, at any price... (Katayama 1988, 00:01:07–00:01:31)

Later it again shifts to Olympus and there is no immediate visual contrast between two different spaces as we have seen in *Appleseed*.

The opening scene of the animated series *Appleseed* XIII (2011) begins with the conversation between Deunan and Briareos in the abundant ruins. Deunan wonders how long they are going to fight the war and what she will do once she finds their paradise. She says that she will work at a bar or restaurant or marry someone. Then the scene shifts to Olympus. Following the original Manga, both 1988 OVA and the 2011 series have more comical scenes between Deunan and her lover Briareos. The 2004 film, however, maintains a more serious tone through the entire film.

Hitomi explains to Deunan that the political system of Olympus is a kind of parliamentary democracy with high-tech public participation through the central AI system *Gaia*. There are three governmental bodies consisting of the representatives of both humans and bioroids, and at the same time Gaia monitors their governance. Those three parties are the Legislature led by bioroid Prime Minister Athena Areios; the Olympus Regular Army led by human General Uranus; and the Council of the Elders, who are also human. There are endless tensions between these parties: the Legislature and its special force ESWAT is expanding powers over Olympus while the head of the Olympus regular army General Uranus is hostile to Prime Minister Athena and bioroids. All members of the Council of Elders are human beings, but they strongly support bioroids gaining further power in the government.

In terms of social and moral codes, other members of society including posthumans such as bioroids and cyborg are supposed to respect and share human-centered ideals and moral values. A concept of citizenship is extended to posthumans in Olympus. Posthumans' political and moral equality are respected to some extent. Bioroids are designed to be empathetic beings as posthuman citizens of Olympus. Hitomi also explains to Deunan "We [bioroids] may be pedigree material, but we don't rule Olympus. We're facilitators of a peaceful and stable society" (00:23:20). As Ueno Toshiya (1998) comments, "it is a paradox that bioroids pursue the ideals associated with humanity and citizenship more profoundly than humans" (87, my translation).

This extended notion of citizenship is similar to sociologist James J. Hughes's broader notion of future citizenship as a basis of harmonious human-posthuman social system or what he calls *democratic transhumanism* in his book *Citizen Cyborg* (2004). Hughes attempts to go beyond a biologically bound notion of humanity and he argues that a broader notion of citizenship becomes a moral common ground among members of democratic transhumanist society.

Hughes proposes several ways to create a harmonious human-posthuman society and to minimize the threat of a "human-posthuman schism." One of these measures is for society to ensure that posthumans are created on the basis of empathy for humanity and morality and to forbid any enhancements to the people who refuse to conform to the basic empathetic and moral code. Hughes (2004, 256) quotes Spider-Man's words on becoming a posthuman, "with great power comes great responsibility." This empathetic condition is very similar to the measures taken in Olympus.

Ager (2010) is not very persuaded about Hughes's precautionary measures because he believes that once the cognitive enhancements are realized, there is no guarantee that posthumans will not modify their morality. According to Ager's argument, posthumans will generate their own moral truth and social moral codes which may be different from those of humans (ibid., 160-171).

Like Ager's skeptical response to democratic transhumanism and his concerns about potentially threatening alternative moral codes of posthumanism, Olympus takes a similar precautionary approach to bioroids. As another anthropocentric condition for the design of posthumans, the reproductive capacities of bioroids are highly restricted to ensure that humans remain humans as a biological species.

To sum up, through both the narrative and the vivid contrast between the two spaces, namely the battlefield and the utopian city of Olympus, *Appleseed* illustrates in a simple and immediate way the possibilities for change with new technology and intelligence. The construction of a utopian city is only possible with the creation of posthumans. Yet at the same time, the narrative also tells us about the problems and limitations of this anthropocentric utopia.

Despite various measures to create a peaceful society, there are inevitably power struggles between different groups, most notably among human essentialists, known as the Olympus Regular army; posthuman essentialists, known as the Council of the Elders; and advocates of harmonious human-post-human society, known as the Legislature. The city stands on vulnerable ground but manages to maintain a balance of power. From the very beginning, *Appleseed* depicts the contrast between humane posthumans and dehumanized humans, and between bioroids and humans. In fact,

Appleseed depicts the contradictory boundary between humans and bioroids in Olympus from the beginning of the story in various ways, from character design to narrative.

In character design, it is difficult to distinguish bioroids from humans, especially in the case of the main characters of the film, bioroid Hitomi and protagonist human Deunan. Both characters are created in a same way, using 3-D CGI with motion capture, along with toon shading ⁸¹ to create a cel animation-like texture. Motion and facial capture technologies are used to achieve lifelike actions, motions and facial expressions of the characters, whereas toon shading is used to give more familiar cel animation-like texture to the audience.

As discussed earlier, *Appleseed* uses a hybrid form of both cel-style and 3-D animation. According to the producer Sori, it was both a major concern and a challenge to create attractive computer-generated human characters, which the audience could emotionally engage with. Toon shading, he argues, is an effective way to achieve such effects. Sori notes that

[In] the process of making *Appleseed*, discovering how the audience could empathize with the characters was the key. And it was very challenging. In order to tackle it we decided to use a 'toon shading', to give the artwork the look of cel animation. This would help the audience feel closer to the characters and be drawn into the story itself. That's the type of CG we wanted to create. (*The Birth of 3D Live Anime* 2005, 00:06:58–00:08:06)

Director Aramaki also notes how he and his team chose this kind of cel animation-like texture for the characters to avoid a sense of uncanny.

I wanted to have characters that one would feel comfortable with and so the style you see in the movie is the one that we settled on, so to speak, in this process. I felt that this was a type of approach that Japanese animation was still familiar with and would not feel too foreign or uncomfortable with. I guess that's the big reason why we chose this style. (Rucka 2005)

Both Sori and Aramaki admit that creating attractive characters is the key to successful story telling in *Appleseed*. In other words, whether a character is attractive or not has an important role to play in persuading and appealing to the audience. Interestingly, it is not only animation creators who see a

⁸¹ Toon shading is a type of rendering technique in computer graphics to make objects resemble cartoon or cel animation with outlines and flat shading.

close relationship between character's attractiveness and its persuasive function; but some scientists and philosophers make similar arguments.

According to computer scientists Ho and MacDorman (2010) attractiveness is one of the important qualities to develop successful humanoids in robotics as well as human characters in computer generated imagery. A hypothetical study in 1970 by Japanese roboticist Mori Masahiro had already indicated a nonlinear relation between the character's degree of human-likeness and the emotional reaction of the human perceivers and explored the concept of the *uncanny valley*. Ho and MacDorman take this work as a starting point for further empirical investigation into the quality of uncanniness. They conduct an experiment showing video clips of various robots and animations including scenes from animated films *Final Fantasy: The Spirits Within* (2001) *The Incredibles* (2004) and *The Polar Express* (2004) to over three hundred participants and asked them to apply ratings from twenty-odd scales to each video clips and images: machinelike to humanlike, unfriendly to friendly and so on. Their study suggests that there are significant correlations among the four qualities: attractiveness, eeriness, humanness and warmth.

Philosopher Noël Carroll (1998a) also suggests that attractiveness could even influence decisions of moral consequence. Carroll argues that rhetoric often plays an important role in cases where mass-art narratives such as films purvey ideology. Carroll points out one of Aristotles' rhetorical strategies – establishing a good character – can also be applied to narrative films to secure a speaker's point of view.

Interestingly, *Appleseed* emphasizes more humane characteristics of posthumans, whereas some humans, especially essentialists, are depicted as less attractive or cruel people. For instance, the bioroids Hitomi and her friend Yoshitsune are drawn in a more friendly and attractive style closer to the protagonist Deunan. Voice acting also plays an important role in building human-like characters of bioroids. Other bioroids such as Prime Minister Athena and her subordinate Nike are government officials and drawn in a sober way. The designs of Athena and Nike are not particularly friendly or attractive but this may be due to their status as government officials, as the story does not tell which stance – supporting the coexistence of humans and posthumans or posthuman essentialism – Athena exactly advocates until the latter part of the story. Whereas the characters in the two essentialist camps such as members' of Regular Army (human essentialist) and the Elders (posthuman essentialist) make an immediately less attractive impression on the audience. They appear rude, cold and in some cases extremely elderly.⁸²

⁸² Almost all of the less attractive characters happen to be male and this may give the impression of gendered character design. There are, however, more attractive male characters such as Hitomi's boyfriend Yoshitsune or less attractive female characters such as Athena.



Figure 25 Attractive characters (Deunan, Hitomi and Yoshitsun, top from left to right) and less attractive characters (General Uranus and the Elders, bottom from left to right). Screen capture from Disc 2 bonus track Character Garally, *Appleseed*.

In addition to character design, *Appleseed* depicts humanized bioroids through both narratives and visual images. For example, a conversation scene between Deunan and Hitomi at the bar depicts Hitomi as a normal girl, rather than a different species (00:38:50-00:40:44). Hitomi's voice and gestures are very natural and gentle. Hitomi asks some personal questions to Deunan, about her family and boyfriend over a cocktail. Hitomi expresses her curiosity about love and asks Deunan, "Tell me, what's love like? What's it like to love someone?" Close-ups of Hitomi with zoom-in are followed by Deunan's close-up. Hitomi's behavior is just like that of a human girl, with emotion, and the close-up and zoom-in shots highlight this aspect of her. Hitomi also says "But it [love] somehow intrigues me. It's one thing I envy in humans." Deunan sends Hitomi a half-smile. During their conversation, a man grabs the chest of another man in the bar, shouting "How dare you speak to a human that way!". Hitomi, watching the scene, says to Deunan, "A Regular Army officer. Why do humans anger so easily?" This short scene also contrasts a humanized bioroid (Hitomi) with a savage human (a Regular Army officer).

The less attractive human characters, such as the essentialists, merely express anger and hatred, whereas the more attractive characters express other emotions such as love, happiness and surprise. Deunan is the most emotional one. In fact, Deunan is generated by the performance of three actresses: Akimoto Tsubasa provides actions; Miwa Asumi provides motions; Kobayashi Ai provides facial expressions and voice, respectively. Animators organize the digitalized data and create the life-like character Deunan (*The Birth of 3D Live Anime* 2005). Deunan expresses not only anger and disgust but also happiness, sadness, fear and surprise throughout the film. Deunan's

affections for her lover Briareos (a cyborg), her mother (human) and her friend Hitomi (bioroid) – both humans and posthumans – become salient in the latter part of the film.

The contrast between inhumane humans and humane bioroids blurs an absolute boundary between human and posthuman. Moreover, the narrative and the above-mentioned visual choices about character design lead the audience to engage more emotionally with attractive characters (e.g. Deunan and Hitomi) than less-attractive characters (e.g. General Uranus and the Elders). Attractive characters are likely to persuade the audience to question that boundary and the concept of essentialism.

Over the course of the story, two conspiracies endanger the coexistence of humans and bioroids in Olympus. One is a terrorist attack against bioroids led by the Regular Army; the other is an attempt by the other faction, the Elders, to extinguish humans using a virus. Both essentialist groups attempt to persuade Deunan not to disrupt their plans but Deunan rejects them each time. Through these episodes, we can see Deunan's firm determination to reject any essentialist views. She rejects both General Uranus's request to hand over *Appleseed* data to him and the Elders when they attempt to spread the virus to humans. One day, unknown assailants attack the bioroids' extension facilities and destroy the next generation of bioroids. The authorities regard this attack as the worst kind of anti-bioroid terrorism. This incident has a severe impact on the existing bioroids in Olympus. Their lives are in danger too since these bioroids require maintenance in order to extend their lives. Responding to this incident, the Olympus government holds an emergency meeting and decides to restore the reproduction capabilities of bioroids. General Uranus, the head of the Olympus Regular Army strongly opposes this decision.

Following the Prime Minister's order, Deunan, Briareos and other ESWAT members launch an important mission to search for Appleseed, the hidden data that can restore the bioroids' reproductive functions. The only clue is an old disc in Deunan's hand. As the investigation into Appleseed continues, Deunan appears to be a key figure in relation to the Appleseed data. All bioroids have the gene of her father, Carl Knute. It was her mother, Doctor Gilliam who created the bioroids and she gave the data over to Deunan just before her death twenty years earlier.

When Deunan and others arrive at the old building where the first generation of bioroids are created, they witness the restored three-dimensional image record of Dr. Gilliam's last moment on site. A symbolic scene is inserted, where a young Deunan makes a promise her mother, Dr. Gilliam, to protect the Appleseed data. Softer lighting and gentle piano music creates a different tone to suggest that this is perhaps one of Deunan's memories. In softer lightening, the brightness of their green eyes and the blue pendant with the Appleseed data stand out. The motif of their green eyes also visually depicts the bond between Deunan and her mother. When her mother says to young Deunan "Protect Appleseed, Deunan", the close-up of Dr. Gilliam's face switches to the close-up of the young Deunan and zooms into Deunan's green eyes and fades out. This scene links to the next

close-up shot of present-day Deunan fading in. Here, gentle piano music also functions as sound bridge and both the visual motif and music indicate the link between Deunan and her mother, and between them and the lives of the bioroids. This scene shifts to the last moment of Dr. Gilliam's life, when she is shot dead. Deunan is very emotional when she witnesses it. She sheds tears and cannot help shouting "Don't shoot her!" and rushes to her mother. Close-ups of Deunan are inserted between the shots of soldiers and her mother. The scenes are shot in slow motion without music. The only sound is Deunan's footstep. When her mother falls over, dramatic music starts, accompanied by Deunan's sobbing.

When General Uranus finds that the Appleseed data is in Deunan's hand, he requests that she give it to him. Uranus tries to persuade Deunan that bioroids will enslave human beings and that he will terminate the lives of the bioroids for the sake of the humans. Conversations between Uranus and Deunan are shot in medium-close-up then switch to a long-shot of soldiers pointing guns at Deunan. When she rejects Uranus's request, saying "Perhaps you're right. But one thing I know for sure, bioroids don't kill bioroids" (01:09:50-01:10:03), the shot switches to close-up of Deunan pointing a gun at the soldiers, and then to close-up of Uranus. The shots of humans (the soldiers, Uranus and Deunan) pointing guns at each other makes a link with Deunan's words "bioroids don't kill bioroids" and contrasts human brutality and bioroid mercy through both their verbal and physical expressions.



Figure 26 Deunan rejects human essentialism, Deunan (left), Uranus (right). Screen capture from Appleseed.

This short scene highlights the inhumanity of the humans and Deunan's rejection of human essentialists. Later, Deunan hands over Appleseed to Athena, a bioroid who supports coexistence of humans and posthumans. The recovery of reproductive capacities of the bioroids with Appleseed data would bring about new possibilities for the bioroids' continued existence as a species.

Although Deunan saves the bioroids from an extinction crisis, there is also the other conspiracy by the Elders to wipe out the humans. In one scene, the Elders reveal their plan to spread a virus to humans to sterilize them, and justify their plan to extinguish the entire human race gradually. The Elders try to persuade Deunan "It's too late. Mankind will surely destroy the planet. We have lost our right to Eden" (01:30:19-01:30:26). Deunan responds to the Elders "Eden may not

await us, but we will struggle onward and decide our future by ourselves" (01:30:36-01:30:43). By zooming into a close-up shot of Deunan and the use of dramatic music, this scene is given an emotional tone in its depiction of Deunan's anger towards the Elders. Again, Deunan expresses her firm determination to reject essentialism – this time, posthuman-essentialism.



Figure 27 Deunan rejects posthuman essentialism, Deunan (left), The Elders (right). Screen capture from *Appleseed*.

Following this scene, Deunan, Briareos and other ESWAT members set off to stop the Elders' plan. The latter part of the film is dominated by a series of dynamic fighting scenes involving Deunan, taking place against a set of the runaway mobile fortresses heading for the virus tank. The background, mechanics and weapons are shot from various angles, with scenes of massive explosions accompanied by dramatic music. At last, Deunan manages to stop the mobile fortress attacks and the crisis ends.

In these two episodes full of conspiracies, essentialists of one side try to destroy the other, whereas other bioroids and the protagonist Deunan fight against essentialists to save both species. Deunan and the bioroids reject the essentialist view and seek possible alternatives.

In summary, by focusing on various aspects of anthropocentric utopian society and its fractures, *Appleseed* challenges various forms of essentialism using its medium – from the narrative to character design, and other visual and acoustic features. The analysis of the above section suggests that anthropocentric utopia in *Appleseed* is similar to a fictional world based on Ager's species-relativism, premised on human essentialism, while the visual narrative of *Appleseed* provides a powerful counterexample to Ager's argument.

The contrast between the battlefield and the newly constructed utopia as seen through the eyes of Deunan gives us a powerful vision of a human-centered future society. Yet over the course of story, we also find the fractures and limitations of such a human-centered vision of future society. Deunan's rejection of any form of essentialism is potentially a place from which to reconsider these kinds of social arrangements. Such arguments, as depicted through the visual narrative of *Appleseed*, can be helpful in reflecting on Ager's species-relativist view, which presupposes distinctive human experiences and values as something unique to humanity.

Species-relativism is to some extent based on human essentialism, as it assumes that some essential or fundamental aspects of experience and/or value are biologically inherent to human beings. Although Ager denies the speciesist view which claims that human interest is the most important one when compared with that of all other species, he argues that current experiences and ways of existence for human beings are special and valuable to human beings and that we should maintain them to remain human. For this reason Ager rejects radical enhancement. In other words, Ager's species-relativist view denies any possibility of new experience and new ways in which human beings might exist with radical enhancement. Species-relativists reject radical enhancement to create posthuman beings from the beginning and see this rejection as a precautionary approach. They are less optimistic about the survival of current experiences and values shared by humans once radically enhanced beings become superior to current humans. However, even though species-relativists insist that some experiences and values are exclusively human ones, *Appleseed* suggests that there is no evidence that posthumans would not share any human experiences and values. Instead, shared experiences and values may create something not authentically belonging solely to humans or posthumans.

Appleseed also presents an alternative vision that transcends anthropocentrism and relativist understandings of human beings. The next section discusses an alternative political strategy of hybridity as a path to human emancipation.

7.3.2. Vision 2: Beyond Anthropocentrism and the Potential of Hybridity

Surviving the extinction crises of both species, bioroids and humans come together to seek new possibilities for constructing a new society. This step allows them the ability to go beyond anthropocentrism and opens up the possibility for new forms of social arrangement. There is a symbolic scene after the final battle is over. The main characters Deunan (human), Briareos (cyborg), Hitomi and Yoshitsune (bioloids) get together and share their joy in the ruin. Briareos talks to Deunan "It's left to us, it's all up to us" (01:40:23-01:40:28). Along with Briareos's words, a close-up shot of him is stitched to Deunan's close-up and she nods an affirmative, before a gradual zoom-out takes the viewer into a long-shot of the characters as a group. Accompanied by dramatic music, this gives a metaphorical meaning: Olympus is left to both humans and posthumans, and it is all up to them.

In the sequence that follows, an alternative view appears more clearly in Deunan's voiceover narration. She says, "It's not as if anything's changed. Perhaps the sins of man [*sic*] will only deepen. But I will continue the struggle. For our children, the true new race" (01:40:55-01:41:17). In this passage, the imagery and background music remain minimal. With long shots and very slow

camera movements, the images gradually shift from the ruins to the remaining skyscrapers in Olympus covered in a ray of sunshine. This visual and acoustic choice leads the audience to focus on Deunan's voiceover narration. I interpret Deunan's mention of "the true new race" as a new situation and a hybrid between human and posthuman. *Hybridity* means the intermingling of different species to produce new species. Here, an idea of hybridity is useful for thinking about alternative views that go beyond the anthropocentrism and the essentialistic idea of human beings, because the idea of hybridity is closely related to the question of whether human beings are a single species or not, which is central to our discussion on species-relativism. I argue that hybridity precisely points out the limits of relativism and essentialism centering on both anthropocentrism in *Appleseed* and species-relativism in Ager's philosophical argument, and provides an alternative political strategy that goes beyond such arguments.

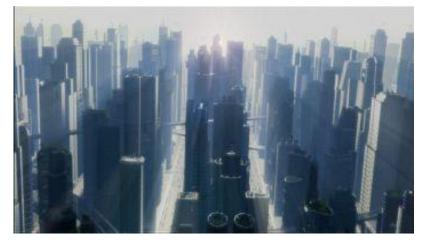


Figure 28 Remained skyscrapers in Olympus: the struggle, the new race and hybridity. Screen capture from *Appleseed*.

Hybrid is originally a term from biology that refers to "the offspring of a mating in which the parents differ in at least one characteristic. The term is usually used for offspring of widely different parents, e.g. different varieties or species" (Martin and Hine 2008). Cultural critics and postcolonial theorists have been rethinking the notion of cultural hybridity since the 1980s. In some of their claims, discussing hybridity becomes a key strategy to challenge cultural essentialism and question assumptions that culture is a fixed and homogeneous entity.

There is a parallel between the visual narrative of *Appleseed* and the arguments made by postcolonial theorists against cultural essentialism. Although these two arguments deal with different categories – species in *Appleseed* and culture in postcolonial theory – they both challenge an existing understanding of these categories. *Appleseed* challenges the prevailing discourse of human being as unique species by depicting a blurred species boundary between humans and posthumans; while postcolonial theorists such as Homi Bhabha argue against a fixed or essentialist

account of racial, cultural and national identity by emphasizing the interdependence of the colonizer and the colonized and how heterogeneous cultural forms result from linguistic, political, cultural, ethnic intermixing.

Appleseed depicts the contradictions and limitations of a standpoint that projects a fixed, homogeneous nature for human beings as species though character design in the narrative. In the very last scene, Deunan decides to continue the struggle for the true new race beyond existing species categories of human or bioroid. In this context, the true new race or hybrid is neither pure human nor is posthuman, but something in-between, something new. Hybridity here is not to emphasize the origins of two different species, humans and posthumans, but rather to anticipate the emergence of something new. Hybridity is also about denying the purity or authenticity of humanity and instead acknowledging the hybrid nature of humanity.

This idea of hybridity has the political potential to transcend human essentialism. Moreover, embracing the hybrid nature of humanity and posthumanity steers us away from the problematic binarism that has until now framed our notions of humanity, or what Ager (2010, 19) terms "the members of biological species *Homo sapiens*." In this context, the species-relativist belief that valued experiences that are relative to different species becomes questionable. The belief functions to restrict humans by forcing them to remain human in a specific sense, denies the possibility of creating shared values between so-called different species, and denies the possibility of hybridity or a new race.

Similarly, at the level of culture, and particularly in terms of colonialism, Bhabha (2004) stresses the interdependence of the colonizer and the colonized and denies a claim for any essentiality of cultural identities and cultural relativism. In his account, colonization is not simply a matter of the colonizer's imposition and control over the colonized and hierarchical relationship between the colonizer and the colonized. Neither the colonizer nor the colonized possesses a homogenous cultural identity. He argues that all cultural identity is produced in what he calls the *Third Space of enunciation*, which denies the homogeneous nature of culture and its representation and reproduction. Bhabha argues that "hierarchical claims to the inherent originality or 'purity' of cultures are untenable" and all cultural systems are constructed in hybrid forms, in this Third Space (ibid., 55). Bhabha defines the Third Space as follows.

The intervention of the Third Space of enunciation, which makes the structure of meaning and reference an ambivalent process, destroys this mirror of representation in which cultural knowledge is customarily revealed as an integrated, open, expanding code. Such an intervention quite properly challenges our sense of the historical identity of culture as a homogenizing, unifying force, authenticated by the originary Past, kept alive in the national tradition of the People. (Bhabha 2004, 54)

By acknowledging the Third Space, we can "ensure that meaning and symbols of culture have no primordial unity or fixity; that even the same signs can be appropriated, translated, rehistoricized, and read anew" (ibid., 55). In other words, one cannot claim purity or authenticity in relation to race, culture or nation. A fixed or essentialist account of racial, cultural or national identity is unsustainable. Bhabha highlights the political significance of such an intermingled space which "displaces the histories that constitute it, and sets up new structures of authority, new political initiatives, which are inadequately understood through received wisdom" (Rutherford 1990, 211).

Although *Appleseed* does not discuss colonialism, and Bhabha's writings do not deal with transhumanism, both works critically engage with issues of difference and boundaries in politics, and challenge us to rethink those issues. Moreover, both works present alternative understandings of species or culture based on hybridity rather than a multi-specism/multiculturalism or a species-relativism/cultural relativism based on the diversity of different species or cultures.

Bhabha explicitly challenges the liberal tradition of philosophical relativism – "the idea that cultures are diverse and that in some sense the diversity of culture is a good and positive thing and ought to be encouraged" – along with the endorsement of cultural diversity and multiculturalism (Rutherford 1990, 207-208). For Bhabha, cultural diversity and "multiculturalism represented an attempt both to respond to and to control the dynamic process of the articulation of cultural difference, administering a *consensus* based on a norm that propagates cultural diversity" (ibid., 208-209). Thus, he strictly makes a distinction between cultural difference and cultural diversity and points out the inadequacy of cultural diversity and the liberal relativist view behind it. For him, cultural difference is something *incommensurable*. In Bhabha's words, "cultures are only constituted in relation to that...otherness internal to their own symbol-forming activity which makes them decentred structures – through that displacement or liminality opens up the possibility of articulating *different*, even incommensurable cultural practices and priorities" (ibid., 210-211 emphasis in the original).

Some may argue that human cultures and species exist on different levels. Indeed, Ager (2010) clearly distinguishes his species-relativist view from cultural-relativism – a view about morality that claims that moral judgments are relative to a culture. "The fact that the boundaries between different species are more significant than those between different human cultures makes species-relativism a more plausible view than cultural relativism" (Ager, 2010 13). Yet differences between species may not always be as significant as one thinks, as with the nineteenth century racial theories studied by Young. What if the boundary between species were blurred? Indeed, *Appleseed* provides a useful source with which to think about this issue of boundaries in a very accessible and immediate way. As the analysis of this chapter showed, the visual narrative of *Appleseed* depicts the contradictions and problems of relativist philosophical arguments based on a fixed idea of the

human species. If we consider an idea of hybridity between species in the fictional world of *Appleseed*, Ager's stance on the tradition of philosophical relativism is unsustainable.

7.4. Conclusion: Hybridity as Emancipation

Through the visual and narrative analysis of *Appleseed* I examined how the anime performs a thought experiment providing a counterexample to Nicolas Ager's species-relativist view based on a homogenous conception of human beings. My analysis suggested that *Appleseed* effectively shows the questionable nature of the boundary between human and posthuman, and highlights the contradictions around such a boundary. It also discussed how ideas of hybridity challenge essentialism and Ager's species-relativist view, and become a political strategy for thinking beyond the existing idea of human beings as a fixed and homogeneous species category. Human species is perhaps not the static homogeneous category that species-relativists imagine it to be, but rather a hybrid and fluid identity constituted in an endless process of struggle and negotiation. The summary of the analysis is threefold.

Firstly, the visual contrast between two spaces – the ruin and the utopian city – presents the change brought by new technologies and a new species, bioroids. 3D CGI is effectively used to highlight different spaces. At the same time, the narrative, however, also illustrates remaining problems in such an anthropocentric utopian city, namely the endless conflicts between different parties and the contradictions behind their beliefs.

Secondly, the character designs and narrative also illustrate the boundary between different species and also the contradictions of such a boundary. Attractive characters – the human and bioroid protagonists Deunan and Hitomi – are designed in identical ways with combinations of motion and facial capture technologies and toon shading, and these attractive characters play an important role in persuading the viewer to question essentialism.

Thirdly, the climax of the film offers an alternative vision that replaces Olympus's anthropocentric approach to society. Deunan rejects any form of essentialism over the course of the story and addresses her determination to struggle for "the true new race." This new situation raises the possibility of hybridity between humans and posthumans and some kind of social and political change. The last scene with Deunan's voiceover narration indicates some hope in Olympus or some sense of emancipation from the existing order, yet it is a very ambiguous utopian project. Indeed, the true new race emerging from human-posthuman hybrids opens up new possibilities to think beyond essentialism and this could be a form of emancipation. In this sense, hybridity is an effective approach to think beyond human essentialism. *Appleseed*, however, does not provide a

concrete vision of political strategies for emancipation. Perhaps there is no such a thing as eternal emancipation but rather endless struggles and negotiation to bring about a new situation. It reminds us that human experiences and human ways of existing are also not something original or authentic but are rather open to endless negotiation and translation for change, and we can never find an essence within the internal self. In other words, the boundaries between different cultures and species do exist but they are not something that simply exists out there in a fixed and clearly defined way, but rather contingently in a ceaseless process of change.