

***Futuristic Reflection on the Aftermath of Humanity:  
Pluto, a Graphic Novel***

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**Abstract**

Urasawa Naoki's graphic novel *Pluto* (2003-2009), set in a virtual post-human world in which human and robots neighbor each other, raises questions about humanity, both ontological and epistemological. *Pluto* is based on and adapted from legendary Japanese cartoonist Osamu Tezuka's manga *Astro Boy* series. In *Pluto*, 5 out of 7 'greatest robots on earth' are killed consecutively by 'Pluto' a mysterious robot villain. Gesicht, android robot detective and protagonist, tracks the murder case. The story attempts a critical reflection on the human and humanity through the life of artificial intelligence robots. *Pluto* tells about the end of humanity through the story in which the greatest robots on planet are being destroyed. A comforting point is that *Pluto* never gives up hope for humanity. Just as God leaves Noah and re-flourishes mankind in the face of peril, *Pluto* presents optimistic expectation on human existence and future through the existence of android robot detective Gesicht. Gesicht and Atom, the last two remaining greatest robots, are eventually killed by Pluto. After the death of Gesicht, his memory chip is used to awaken Atom, and the last moment of Gesicht right before the destruction is implanted into the memories of Atom. It was his words of "Nothing comes from hatred" and the human emotion of love and forgiveness. The existence of Gesicht tells that artificial intelligence has already evolved into a new humanity who is superior to human beings physically and ethically, and consequently post-human age has begun.

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## Introduction: Post-human World

Urasawa Naoki's graphic novel<sup>1</sup> *Pluto* (2003-2009) is set in a virtual post-human world in which human and artificial intelligence coexist and raises questions, both ontological and epistemological, about humanity.<sup>2</sup>

*Pluto* is based on and adapted from legendary Japanese cartoonist Osamu Tezuka's "The Greatest Robot on Earth" episode in his original *Astro Boy* series. In Tezuka's original story, the seven greatest robots are killed consecutively by Pluto, a mysterious robot villain. Astro Boy or Atom as known in Japan by its original name, one of the seven robots, emerges as a protagonist and develops a heroic adventure to prevent the serial murder. *Pluto*, while maintaining a large plot of the original story, is restructured and 'reborn' into a futuristic thriller and suspenseful murder mystery with complicated storyline, hidden narratives in deeper level, and intense drama development. In *Pluto*, a Europol robot detective Gesicht, instead of Atom, appears as a main character and tracks the murder case. *Pluto* goes beyond the scope of simple sci-fi adventure story and touches on the fundamental theme of 'evil'. It is confirmed by the fact that the author Urasawa emphasizes the role and meaning of Pluto, the serial killer robot appearing in Tezuka's original story, as original and enduring evil, and then adopts the villain's name as the title of his work.

In the world of *Pluto*, robots not only live with humans but also live human lives. Those equipped with artificial intelligence have the ability to remember, think and judge just as humans do. They have the same appearance as humans, marry like humans, nurture children, have jobs, and go on vacation. The protagonist Gesicht is also an artificial intelligence 'android' robot who has the perfect body shape and features of human being, and lives a human life both at work and home.<sup>3</sup> He passes for human in every way imaginable. For example, his job is a special investigator for Europol. He once adopted and raised a child who is dead now. It is not easy and rather

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<sup>1</sup> Graphic novel is a type of comic book. But distinguishes itself from regular comic strips serialized in magazines, Graphic novel has a complete narrative structure like a monograph novel. Comic strips are normally completed through six, eight, or twelve episodes. The finished story is called a story arc, and the finished story arc is combined into a book, which is a graphic novel (Lee 2013).

<sup>2</sup> *Pluto* originally appeared in Shogakukan publishing company's monthly comics magazine *Big Comic Original* from 2003 to 2009. It was published in 8 volumes from 2004 to 2009, and its English edition was released from 2009 to 2010. As of October 2010, *Pluto* was sold more than 8.5 million copies. It won many awards both domestic and abroad, which include Tezuka Osamu Cultural Prize (2005), Excellent Prize at the Japan Media Arts Festival (2005), Seiun Award for Best Comic (2010), Prix Asie-ACBD award at Japan Expo (2011), and Intergenerational Award at the Angoulême International Comics Festival (2011).

<sup>3</sup> 'Humanoid' is a robot with a body shape built to resemble the human body. For example, a robot having a head, a trunk, arms and legs, etc., and each body part performing its own function corresponds to this. 'Android' refers to something that resembles not only the physical structure and functions described above, but also human appearance. The French writer Auguste Villiers de l'Isle-Adam's *Tomorrow's Eve* (1886) is regarded as a novel that popularized the term 'android' (Stableford 22), but the humanlike robot lady named 'Hadaly' feature in the novel is more like a humanoid than an android. Karel Čapek's science fiction play *R.U.R.* (1921) is regarded as the work that introduced the word 'robot' to the world (Stableford 22). This novel presents robots as organic artificial humans, which is considered the first android characters in literary history.

impossible to tell human from robots in the scene where he talks to a travel agent for a vacation trip with his wife.

AGENT: Excuse me, but both of you and your wife are robots, aren't you?

GESICHT: Why, yes... Any problem?

AGENT: No, we just have a lot more robots that are travelling these days... I'm a robot too... (Book 1, Act 3, 66)

Gesicht visits the artificial intelligence camp, which corresponds to a robot prison, to investigate the murder case. As he talks to the staff here, it is impossible to tell which is a human and which is a robot, and the distinguishing effort itself becomes even more absurd and pointless. Rather, this scene suggests that robots are superior to humans in terms of economy and efficiency of action.

OFFICER: So... inspector... you're... a robot, are you...?

GESICHT: Yes, I am...

OFFICER: Hmph... it's hard to tell men from robots nowadays.

GESICHT: Actually, there is one *easy* way...

OFFICER: Yeah? And what's that?

GESICHT: Humans make lots of unnecessary movement... (Book 1, Act 3, 69)

In the world of *Pluto* where robots and humans neighbor with each other, the rights of robots are protected by law, robot judges rule the laws, and the robot history is included in the regular school curriculum (Book 3, Act 3). The group advocating the human rights of robots and the extreme right-wing groups claiming to abolish the Robotics Human Rights Act are sharply confronting (Book 3, Act 18).<sup>4</sup> Crime of kidnapping and destroying a robot child occurs (Book 5, Act 35). In this world, robots live among humans, sometimes living as humans, sharing lives with human beings.

### **Questions about Humanity**

Detective Gesicht visits the artificial intelligence camp in Düsseldorf, Germany, looking for clues to serial killing of the most powerful robots on the planet. Here he seeks advice from BRAU 1589, an artificial intelligence robot, who is imprisoned here. BRAU 1589 warns that the killer is Pluto and will destroy all of the seven greatest robots, including Gesicht himself (Book 1, Act 3). Gesicht, who was tracking the murder case, finds that the killer Pluto is also an artificial intelligence robot.

The background of Pluto's birth dates back to the time of the 39th Central Asian War. At that time, Darius the 14th, King of Persia, was full of ambition to conquer Central Asia. To this end, he invaded neighboring countries with the full force of advanced robot army. Meanwhile, President Alexander of the United States of Thracia, who was concerned about the robotic military power of Persia, established the 'Treaty on the Prohibition of Mass Destruction Robots' and the United Nations endorsed it. When the treaty was approved, President Alexander accused Persia of harboring

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<sup>4</sup> This situation reminds us of moments in actual human history: for instance, the ratification of the 13th Amendment of the U.S. Constitution in 1865 that abolished black slavery, and the resistance of the Ku Klux Klan, a white supremacist organization founded in 1866, in response to this pro-human rights movement.

robots of mass destruction. Accordingly, the United Nations sent an inspection team of scientists to Persia. The inspection team found only the wreckage of discarded and destroyed robots, but failed to find mass destruction robots in question. Nevertheless, Thracia with the rest of the world, invaded and destroyed Persia's advanced robot army. This is the 39th Central Asian War, in which five out of the seven world's greatest robots participated in actual fighting.<sup>5</sup> King Darius burned with the hatred and vengeance on the world that devastated his kingdom, and determined to destroy the world. Under his leadership, Pluto, the most advanced artificial intelligence robot in the world, was created.

In addition to the robots participating as peacekeepers in the Central Asian War, human scientists sent to Persia at that time were also killed by Pluto. At this point, *Pluto* raises a serious question: can robots kill humans? As mentioned before, *Pluto* is set in post-human space-time. This is the world where humans and artificial intelligence robots coexist, and there is a set of robot laws created by humans. The first article of the 'Laws of Robotics' is that a robot is not allowed to injure a human being. Since first introduced by the American writer Issac Asimov in his 1941 short story "Liar!", this principle has existed as a fundamental and self-evident maxim in the future society where humans and robots neighbor each other.<sup>6</sup>

The principle that 'robots cannot injure human beings' reveals human fear of robots. Although robots are creatures made by humans for their own convenience, humans cannot avoid the anxiety that these creatures can evolve into dangerous beings that go beyond human ability and even threaten humans. This is evident at the beginning of the work when Gesicht visits the artificial intelligence camp to find clues to serial killing. He witnesses that the camp building is being managed by a thorough safety and control system, which rather discloses the underlying instability inherent in human psychology. He hears a whisper of taunting the human anxiety.

BRAU 1589: Heh heh heh... So, how do you like my little barricade? They put it up so fast, I had to laugh... In spite of all their high-tech security devices... the humans are terrified without silly precautions like this... (Book 1, Act 3, 75)

It turns out that the whisper is from BRAU 1589 who is confined here in the camp. Gesicht has a conversation with BRAU 1589 about the serial killings in the matter, and one important fact is revealed during this. That is, this is not the first time that

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<sup>5</sup> The world's seven greatest robots are Mont Blanc in Switzerland, North No. 2 in Scotland, Brando in Turkey, Hercules in Greece, Gesicht in Germany, Epsilon in Australia, and Atom in Japan. Among them, the pacifist Epsilon refuses to conscript, and Atom appointed as US messenger of peace, falls out of the fighting.

<sup>6</sup> American writer Issac Asimov first introduced this principle in his short story "Liar!" (1941). Later in his short story "Runaround" (1942), Asimov expands it into 'Three Laws of Robotics', which are as following: 1. A robot may not injure a human being or, through inaction, allow a human being to come to harm; 2. A robot must obey the orders given it by human beings except where such orders would conflict with the First Law; 3. A robot must protect its own existence as long as such protection does not conflict with the First or Second Laws. Asimov, later in his novel *Robot and Empire* (1985), adds the 'zeroth article' which is as following: 0. A robot may not injure humanity, or, by inaction, allow humanity to come to harm. Introducing the zeroth article, Asimov raises the first article to the upper level, extending the scope of protection from an individual human being to the entity of humankind.

artificial intelligence has killed humans. In fact, BRAU 1589 was a criminal who murdered a human being eight years before the Pluto case. The appearance of Pluto tells that human killing by artificial intelligence ‘has recurred’ and that additional human killing by robots ‘will be recurring’ in the future.

In the process of designing and manufacturing robots, humans have programmed safety devices to prevent their lives and interests from being violated under any circumstances. In addition, human beings have provided legal devices to ethically justify human rights over robots, and the result is the Laws of Robotics. The Laws of Robotics is “the essential guiding principles of a good many of the world’s ethical systems” (Asimov 138). However, the existence of Pluto, the human-killing robot, demonstrates that the physical and ethical stabilizing mechanisms to protect human life and rights are ineffective and that the human-centered order system has already been broken down. This situation exposes the weakness of man as ‘the creator who is overthrown by the creature’. It discloses the fragility of narcissistic status of human being as ‘the lord of all creatures’. It raises a fundamental question about the meaning of ‘the human’ and ‘humanity’. And this question leads to an awakening to the ‘possible’ reality in which the dichotomy between humans and robots is dismantled.

Euro-Federal scientist Dr. Hoffman is the person who created Gesicht. While examining the body of Gesicht, Dr. Hoffman learns that this artificial intelligence robot dreams like a human being. According to Dr. Hoffman, it is the evidence that robots also have the subconscious. Dr. Hoffman adds that robots can also be tired like humans and, therefore, humans and robots are the same in that they are mechanisms.

HOFFMAN: By the way, Gesicht... About those dreams you once told me about... You still having them?

GESICHT: Yes...

HOFFMAN: Hey, I don’t want to put you on the spot. I’m just very interested in dreams experienced by robots with artificial intelligence. It’s been scientifically proven that artificial intelligence can have a subconscious... But it’s not often I get to meet a robot that actually has dreams... (Book 1, Act 2, 49)

HOFFMAN: Well, most people believe that robots don’t tire. But the more human you become, the more stressful it’s got to be, right? To put it another way, even the human body is a kind of mechanism. You work something too hard, and any mechanism will wear out. (Book 1, Act 2, 45)

The sign of the collapse of the dichotomy between humans and robots is also evidenced by the fact that artificial intelligence feels human emotions. One day, Gesicht meets Atom at a restaurant to get a clue of the murder case. Watching Atom enjoying the food, Gesicht sees from this child robot ‘a human’ as real not as pretended. As parting with Atom, Gesicht himself also feels human emotion.

ATOM: What’s the matter?

GESICHT: Nothing... It’s just that you really seem to be enjoying your ice cream! Compared to you, it probably looks like I’m just *pretending* to drink...

ATOM: Well, after pretending all the time... I eventually really got it... [...] Got what “delicious” really means... [...] I don’t understand the actual sensation humans talk about... But I can kind of just feel it...

GESICHT: Incredible... Mind if I ask you a question, Atom? [...] When you saw that boy with the new toy, did you really wish you had one too? [...] And that snail you found in the rain... Were you just thinking that you'd come across a pulmonate gastropod mollusk, a member of the helicidae family... Or did you feel some kind of emotion...? [...] When you saw that it was a living thing, did you feel excited...? (Book 2, Act 8, 14-17; emphasis in original)

GESICHT: The kid stood there and kept waving goodbye... Kept waving until I couldn't see him anymore... I may be a robot... But I somehow found myself overcome with emotion... (Book 2, Act 8, 28)

### **Humanity and Aftermath**

Atom talks with Dr. Ochanomizu, the Minister of Science and Technology of Japan, about BRAU 1589, the first robot to kill humans. It is worth noting that this scene suggests the possibility of artificial intelligence's evolution to 'a perfect human'.

ATOM: Do you think the person behind all this is a *human* or...

OCHANOMIZU: ... A robot?... Or perhaps a combination of the two...? There's only one precedent for a robot committing murder... And that's the case of BRAU 1589.

ATOM: Is that really true?

OCHANOMIZU: Why do you ask?

ATOM: Well... I was just wondering where the defect was in the AI of BRAU 1589...

OCHANOMIZU: There was no defect... He was perfect...

ATOM: Perfect? Perfect and yet he *killed* a human... What does that mean, Professor? Are you saying... that's what being human is? (Book 2, Act 10, 77-80)

The dialogue suggests a striking issue, which is 'perfection to killing humans'. Robots cannot kill humans, but humans can kill humans. Meanwhile, when a robot kills a human, it means that the robot has already evolved into a human. This implication suggests another controversial point: the perfect human being is a murderer. In other words, 'perfection to killing humans' can be an insight into the fundamental limitation and vulnerability of human existence.

Regarding the fundamental limitation and vulnerability of human existence, significant is the final statement King Darius makes in the military court as he refuses to take an oath. According to him, vulnerable human beings are a failure of God, and therefore the arrival of new species or 'post-humans' to replace humans, is the inevitable step in an evolutionary process.

DARIUS XIV: Oath, you say...? God has little faith in the oaths of man. Men tells lies. God has no faith in the likes of man. As far as God is concerned, man is a flawed creation. A failure. He must be replaced by something else... By some kind of new species... the robot. [...] It was a step in an evolutionary process. (Book 5, Act 34, 59-61)

## Conclusion

Artificial intelligence robots appearing in *Pluto* resemble human beings. From appearance to emotion, they are the human copies. They feel like humans. They are manipulated by the hatred like humans, and their hatred is expressed through the violence of murder. Not to overlook is that humans are also manipulated by the biased feelings of hatred. Excessive obsession and desire for honor, power, and possessions gave birth to hatred against other. And driven by this biased feeling, humans committed murders, crimes and wars. The history of mankind proves this: it could be a history of biased feelings. Human beings are like a puppet controlled by something. Humans believe that they are manipulating robots, but they are also being manipulated. At this point, the boundary between robots and humans are blurred.

*Pluto* attempts a critical reflection on the human and humanity through the life of artificial intelligences. *Pluto* tells about the end of humanity, as a failure of God, through the story in which the greatest robots on planet are being destroyed. A comforting point is that *Pluto* never gives up hope for humanity. Just as God leaves Noah and re-flourishes mankind in the face of peril, *Pluto* presents optimistic expectation on human existence and future through the android robot detective Gesicht. Gesicht and Atom are eventually killed by Pluto. After the death of Gesicht, his memory chip is used to awaken Atom, and the last moment of Gesicht right before the destruction is implanted into the memories of Atom. It was his words of “Nothings will be born from hatred” (Book 8, Act 62, 163) and the feelings of love and forgiveness. The love and forgiveness felt by Gesicht is “the power to break the cycle of hate” and “the beauty within to overcome the darkness” of human nature (Gustafson 2013). The existence of Gesicht tells that artificial intelligence has already evolved into “the new humanity” who is superior to human beings physically and ethically (Gustafson 2013), and consequently post-human age has begun.

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