(Article)

The Ascent of Man: Optimism in 2001: A Space Odyssey

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Abstract

2001: A Space Odyssey is an optimistic, cinematic allegory. Most critics have hitherto focused on the negative aspects described in the film concerning the advancement of science and technology such as the man-ape who becomes the first murderer in human history, the rebellion attempted by a human-like computer HAL, and the nuclear-equipped satellites orbiting around the Earth.

Nevertheless, by looking at the work carefully, it will be found that these issues are caused by the fallible nature of man, and not by technology itself. Kubrick expresses human fallibility, possessed even by HAL, as a sort of baptism by fire, and allows mankind to evolve into a new species with the help of the monoliths and their creators, the beings superior to humankind. The main theme of 2001 is not about the merits and demerits of scientific technology but about overcoming human fallibility.

This optimism originates from Kubrick's perspective toward the future: he believed that scientific technology would progress permanently and hence a hopeful future would be promised. Moreover, his optimism was naive but neither unique nor groundless. It was the Zeitgeist of the 1960s US that made 2001 an optimistic work.

1. Introduction

1-1. Optimistic Perspectives toward the Future of Man

In 1968, a year before the first lunar landing, Stanley Kubrick released a science fiction film, 2001: A Space Odyssey, in cooperation with the world-famous sci-fi writer, Arthur C. Clarke.

2001 is an optimistic allegory. Unlike Kubrick's *Dr. Strangelove or: How I Learned to Stop Worrying and Love the Bomb* (1964), mankind in this film "has survived thirty-three years more without extinction" from 1968, despite the fact that 2001 was filmed in the very midst of the Cold War. Rather, as one critic points out, Kubrick celebrates a number of births in the film: Dr. Floyd's little daughter, Poole the astronaut, the artificial intelligence "HAL," "Star-Child," and moreover, human beings in general. As the motif of sunrise appears repeatedly, humankind sets sail for a new stage of being in the opening years of the twenty-first century.

Kubrick depicts the elevation of humanity accomplished by transcendent existence, the monoliths and their creators. Unlike other mediocre sci-fi films, these beings are not enemies, but teachers who cultivate and guide mankind upward. Without their aid, human beings would have become extinct in ancient Africa or have exterminated themselves with nuclear weapons as in *Dr. Strangelove*. Until the last minute, the monolith creators prompted the "ascent of man" with their highly scientific and almost magical abilities.

Where is this optimism coming from? To conclude in advance, it originates from the director's perspective toward the future. Kubrick believed that the world can be improved with mankind's will to progress, even though the United States during the 1960s was beset by a multitude of social and cultural problems such as the Vietnam War, numerous assassinations, and the possibility of nuclear annihilation. Alternatively, this dire situation was all the more reason why Kubrick made 2001 an optimistic work.

Many critics have hitherto focused on negative aspects described in the film of science and technology such as the man-ape who becomes the first murderer in human history, the rebellion attempted by a human-like computer HAL, and the nuclear equipped satellites orbiting around the earth.⁴⁾ Science and technology could easily have been seen as leading mankind astray.

Nevertheless, by looking at the work carefully, it will be found that these issues are caused by the fallible nature of man, and not by technology itself. In fact, Kubrick expresses human fallibility, possessed even by HAL, as a sort of baptism by fire, and allows the characters to advance with the help of the monoliths and their creators. The main theme of 2001 is not about the merits and demerits of scientific technology but about overcoming the fallible nature of man.

1-2. Ambiguity of the Film

The reception of the film was mainly positive, and *2001* set a new box-office record in 1968.⁵⁾ Many critics, however, criticised the film immediately after its release. For instance, Renata Adler, journalist and film critic, mentions in the *New York Times* as follows: "[t]he movie is so completely absorbed in its own problems, its use of color and space, its fanatical devotion to science-fiction detail, that it is somewhere between hypnotic and immensely boring." Likewise, *Time Magazine* complained: "the ambiguous ending is at once appropriate and wrong. It guarantees that the film will arouse controversy, but it leaves doubt that the film makers themselves knew precisely what they were flying at." Barton Palmer analyzes the reason for the differences in reception between the audience and the critics and concludes that it was due to the generation gap. The audience of the film was reported as being eighty percent thirty-five age or under, down to five. On the contrary, the critics at the screening were ninety percent between thirty-five and sixty. The sixty of the screening were ninety percent between thirty-five and sixty.

These critical reviews partially arise from the ambiguity of the film. In fact, 2001 has an unconventional structure in comparison to the other contemporary movies. It does not allow audience to develop "literary interpretations." In 2001, nearly thirty minutes pass before the first words are spoken and there is no narration at all to make the story clearer. Indeed, there are only forty-six minutes of dialog scenes as opposed to one hundred and thirteen of non-dialog. Frederick Ordway, scientific and technical consultant for 2001, who had also work experience with NASA, advised Kubrick after the film was released that there should have been narration and pointed out where the director should have put them. 12)

According to Clarke, Kubrick had planned to begin the film with a short documentary-type prelude, in which noted scientists and philosophers would establish the scientific credibility of the theme for *2001*. The prelude included astronomers such as Harlow Sharpley, Sir Bernard Lovell, Fred Whipple, Frank Drake, rabbi Norman Lamm, anthropologist Margaret Mead, and Russian scientist A. I. Oparin. However, these interviews were never used.¹³⁾

As Kubrick himself commented in an interview, ineffectual dialog was cut out and attempts were made to convey important points "in terms of action." Moreover, he mentioned in another interview that 2001 is a nonverbal, visual experience, one that bypasses verbalised pigeonholing and directly penetrates the subconscious with an emotional and philosophic content just as music does. In short, 2001 is an experimental work which challenges the audience to interpret its contents in an unprecedented way.

1-3. Clarity of the Novel

By contrast, Clarke explicitly describes all the ambiguation shown in the movie. For example, he explains in detail the reason for HAL's failure, the purpose of setting the monolith on the moon by the monolith creators, and things which take place in Astronaut Bowman's trip through the Star Gate.

According to Clarke, he and Kubrick had predetermined that the novel would be written first, and the script would derive from it. In practice, the result was far more complex. Toward the end, both novel and screenplay were written simultaneously, with feedback in both directions. Kubrick and Clarke frequently had discussions about the future of the work, and Kubrick even proofread and directed the draft of the novel version of 2001 which Clarke had written numerous times from 1964 to 1968.¹⁶⁾

In short, the novel is not a mere novelisation which rests on the film. Both Kubrick and Clarke produced both versions, and all the contents in the Clarke's 2001 were agreed upon by Kubrick. It is true that there are some differences between the novel and the movie. For instance, the monolith on the moon is three million years old in the novel whereas it is four million years old in the movie. Besides, the target planet of *Discovery One* is Saturn in the novel, not Jupiter. Changing destination was due to a technical problem. The filming techniques in the 1960s could not visualize the ring of Saturn with a satisfactory level. However, they do not bring about evident differences to the conclusion. Therefore the novel version of 2001: A Space Odyssey can be used as a supplementary source.

The following section, 2. Synopsis of 2001, tries to interpret this work and make the story clear with the help of Clarke's novel. It reveals that 2001: A Space Odyssey is all about the human evolution achieved by the beings superior to mankind. Moreover, the momentum of the evolution is science, technology and intelligence.

The subsequent section, 3. A Laughingstock or Painful Embarrassment, explains that Kubrick defines the higher beings as the monolith creators in 2001 and makes the audience confirm how much humankind in the 1960s has ascended the evolutionary stair: human beings may still be imperfect, even though they are about to reach the moon in 1969, the year after the film's release. In short, the man-apes and human beings are essentially the same for the monolith creators. However, the rebirth of Astronaut Bowman into the Star-Child removes any pessimism from 2001. The "giant leap for mankind" achieved by Astronaut Bowman at the last scene means that the violent and uncertain world of the 1960s is not a dead end for human evolution.

The final section, 4. Beyond the Infinite, aims to uncover the optimism held by Kubrick through his interviews. His optimism was naive but neither unique nor groundless. It was based on a plausible presumption for 1960s contemporaries: scientific technology would progress permanently and the future hopeful. The optimism in 2001

is also rooted in this same presumption. It was the American Zeitgeist of the 1960s concerning the advance of science and technology that made 2001: A Space Odyssey an optimistic work.

2. Synopsis of 2001

2001: A Space Odyssey begins with a picture of the orbital conjunction of the earth, the moon, and the sun against a black space, while Richard Strauss's Also sprach Zarathustra (Thus Spake Zarathustra) is played. Kubrick explains in an interview that the idea of a magical alignment of the sun, the earth, and the moon, or of Jupiter and its moons, was used throughout the film to show that something magical and important is about to happen. 19)

2-1. The Dawn of Man

The first sequence, *The Dawn of Man*, is set in the prehistoric African veldt. Manapes, the ancestors of human beings, are starving and low in the hierarchy of the animal kingdom. One morning, one black rectangular slate, the monolith, suddenly appears in front of the man-apes. They seem to be frightened but finally touch the artefact out of curiosity. After the image in which the sun rises from the monolith, a scene that immediately reminds viewers of the sun rising from the earth's horizon, one of the manapes comes up with an idea: he uses a bone of a dead animal as an extension of his arm.

Again, Also sprach Zarathustra begins while the man-ape triumphantly and intently breaks a skull of tapir over and over. Thus the man-apes obtain tools/weapons. After this sequence, the man-apes become predatory and their tribe wins a fight over drinking water, taking advantage of their innovation. And then, in one of the most famous scenes in film history, a cut is made from a bone-weapon thrown up to the nuclear equipped man-made satellite circling around the earth, jumping in time and space, from Africa four-million-years-ago to the space world in 2001.

It is worthy of mention that the man-ape who used the bone as a weapon and attempted the first murder in the history is named "Moon-Watcher" in the novel. Clarke singles out Moon-Watcher for intelligence, while depicting the other manapes as inferior: "[i]n those dark, deep-set eyes was a dawning awareness — the first intimations of an intelligence." His name, Moon-Watcher, indicates not only that mankind is destined for exploring the moon in the distant future but also that the next monolith will be found on the lunar surface as shown in the subsequent section.

After the murder scene, Clarke also presents his interpretation about human evolution which obtained Kubrick's agreement like other ideas:

For a long time, intoxicated by victory, Moon-Watcher stood dancing and

gibbering at the entrance of the cave. He rightly sensed that his whole world had changed and that he was no longer a powerless victim of the forces around him.

Then he went back into the cave and, for the first time in his life, had an unbroken night's sleep.²¹⁾

In other words, the man-apes as ancestors of mankind have conquered nature by developing tools and weapons, precursors of latter scientific technology. Moreover, the man-apes in the novel become omnivores after this sequence as depicted in the film. Their standard of living has been remarkably improved by the monolith, an embodiment of a supreme intelligence which shepherds mankind to become scientifically advanced beings. The man-apes do not have fangs, wings, or rapid legs to flee either. But finally, they obtained intelligence which outweighs all these weaknesses.

This interpretation also leads to an idea that mankind and the man-apes are classified into different creatures from the standpoint of intelligence which has enabled mankind to use tools. In other words, human beings have become human beings only after they gained intelligence and obtained tools. Therefore the bone as a symbol of intelligence, technology, or destructive force mediates the cut to the world in the year of 2001, where these flourish spectacularly.

In the beginning of the following sequence, spaceships gracefully waltz to Johann Strauss II's *An der schönen blauen Donau* (*On the Beautiful Blue Danube*). Aboard one of the spacecrafts, Dr. Heywood Floyd, chairman of the National Council of Astronautics, is flying to a space station orbiting around the earth. On the station, Dr. Floyd is asked a question by a Russian scientist Dr. Smyslov, whether or not the recent denials of landing on Clavius Moon Base and the communication difficulties to the base have been due to the outbreak of epidemic on the base. But Floyd only sidesteps the inquiry and leaves for the moon.

Throughout these scenes and the following section, Kubrick seems to celebrate the space gadgets in the year of 2001 as ultimate products of scientific technology, such as voiceprint certification systems on the space station, a videophone communicating between the station and the earth, liquid space diets packed in boxes, space travels to the moon serviced by Pan Am, and a zero gravity toilet. These detailed scientific stage settings have great effect not only to astonish the audience but also to give depth and reality to the imaginary future shown in 2001.

On Clavius, Floyd gives a briefing and explains the truth to the audience of the movie: a curious magnetic field has been generated near Tycho crater and a black artefact has been found which is thought to have been deliberately buried four million years ago. In short, he has visited Clavius to investigate the mysterious monolith as

an expected cause of Tycho Magnetic Anomaly 1 (TMA-1): the rumour about the epidemic is a cover story in order to prevent world-scale panic.

After the briefing, a party of scientists with Floyd travel to Tycho crater and stand in front of the uncovered monolith, and they touch it. Suddenly the monolith begins to emit an ear-piercing sound which represents an intense magnetic signal aimed at Jupiter, just as they are on the verge of taking a photograph of their discovery. According to the novel, the sunlight triggered the alarm of the monolith to let the monolith creators know that the earthling has evolved enough to travel space and explore their satellite.²²⁾

Many critics emphasised the negative aspects of technology which the monolith enhanced, such as the bone-weapon or the murderous computer HAL.²³⁾ However, the symbolic products of the monolith are not simple or one-sided. The monolith has brought forth not only destructive powers but also the creativity which gave birth to all the space gadgets. The best illustration is a floating pen in the scene in which Dr. Floyd is flying to the space station. In the sequence, Dr. Floyd's pen drifts out of his chest pocket while he sleeps in the spaceship.

It is in parallel that Kubrick shoots these three slender objects: namely a bone thrown up by Moon-Watcher, a nuclear-equipped satellite and Dr. Floyd's floating pen.²⁴⁾ They all are outcomes of the monolith and they all are tools. Still their purposes vary: to kill and to create. In fact, Clarke states as follows:

And somewhere in the shadowy centuries that had gone before they had invented the most essential tool of all, though it could be neither seen nor touched. They had learned to speak, and so had won their first great victory over Time. Now the knowledge of one generation could be handed on to the next, so that each age could profit from those that had gone before.

Unlike the animals, who knew only the present, Man had acquired a past; and he was beginning to grope toward a future.²⁵⁾

The floating pen is a symbolic representation of knowledge and civilisation. In other words, the monolith has just given human beings intelligence no more and no less. The intelligence has made Moon-Watcher a killer, but also allowed mankind to change the world around them, to survive in the harsh and hostile environment, and to evolve enough to journey across space. The paradoxical nature of technology depends on humanity itself.

2-2. Jupiter Mission

In Jupiter Mission, five American astronauts and HAL, the highly advanced HAL

9000 computer, are on a space odyssey to Jupiter aboard their spaceship, *Discovery One*. On the way, only two astronauts, Dr. David Bowman and Dr. Frank Poole, and HAL are awake to control their ship while the other crews are in a state of hibernation. An interview with Bowman, Poole, and HAL with *BBC News* is shown in the film and the audience comes to know a lot about HAL. He is able to converse, play chess, and control many of the functions of *Discovery One*. He can reproduce "most of the activities of the human brain with incalculably greater speed and reliability." Moreover, he answers to the interviewer that no *HAL 9000* computer "has ever made a mistake or distorted information," and they are all "foolproof and incapable of error."

However, HAL does make a mistake. He predicted the malfunction of AE-35 radar unit but it works properly. Bowman and Poole worry about the future of the mission and decide to shut down HAL's main function. Although their conversation takes place in a closed space pod in order to conceal their conspiracy, HAL reads their lips, looking through the grass window of the pod, and comes to know that his life is threatened.

After *Intermission*, Poole is killed by HAL on his way back to restore the AE-35 unit. HAL murders other members of the crew too, who are in hibernation. Bowman, the only survivor, comes in through the emergency air lock of the spaceship after he has retrieved the body of Poole and abandoned it. Then he goes to the logic memory center, the maximum restricted area, to cut off HAL's functions from the operating system of *Discovery One* by lobotomising his brain. As Bowman pulls out the memory module, HAL begs for his "life." However, he finally degenerates and starts to sing a song, *Daisy Bell*.

After a while, a nearby screen monitor suddenly begins to play a video message from Dr. Heywood Floyd, the main character in the previous section, which is originally planned to be played when they have reached to the orbit of Jupiter. Floyd tells Bowman that the first evidence of intelligent life outside of the earth was discovered on the moon eighteen months ago, and it was buried 40 feet below the lunar surface. He continues to say that the four-million-years-old monolith released a strong radio emission aimed at Jupiter. Then the audience realises that the crew has not been informed the true purpose of their mission: to explore the origin of the monolith and its creators.

One of the central characters in *Jupiter Mission* is HAL, whose name is sometimes supposed to be named after IBM a letter-back-each.²⁹⁾ HAL appears on the stage as one of the most cutting-edge products of the twenty-first century technology, but he has malfunctioned and murdered. Some viewers may regard his role as killer as a negative aspect of scientific technology, akin to the "bone-weapon." However, this interpretation misses the point: HAL is almost human and to err is human. Hence to err is of HAL as well.

As some critics point out, HAL is more human than human.³⁰⁾ Kubrick describes

HAL as a humanlike computer by showing the audience HAL's humane reactions to the crew. HAL expresses various feelings such as pride, anger, and fear. Not only that, the humanness of HAL is emphasised by contrasting the monotony of the self-possessed *human* characters, Bowman and Poole. In fact, the deaths of the astronauts are much more dehumanised than HAL's. They are filmed as "close-ups of electronically controlled charts, a pulsating coordination of respiration regulators, cardiographs, and encephalographs," as one article points out.³¹⁾

By contrast, the degeneration of HAL caused by the lobotomy with one single screwdriver may remind some audiences of Charlie Gordon in *Flowers for Algernon* (1966), whose intelligence is increased by an experimental surgery and finally declines to an infant level.³²⁾ Kubrick obviously attempts to make HAL a human character by the cruelty of the artificial decay of his intelligence and his death.

Also, Clarke describes HAL as if he is a living person. To HAL, deliberate error is unthinkable. Even the concealment of truth fills him with a sense of imperfection: HAL has been forced to keep the true purpose of the mission from the crew by his programmers. HAL began to make mistakes due to the suppression of the secret. But this is still a relatively minor problem. He might handle it as most men, if he were not faced with a crisis that challenged his very existence. He has been threatened with disconnection. This is equivalent to death and thus he sought to protect himself.³³⁾

Moreover, Clarke even explains that HAL's builders have failed fully to understand the psychology of their own creation.³⁴⁾ In short, the blame for murdering the astronauts is the fallible nature of the human programmers. Even though mankind in *2001* is highly scientific beings capable of making a space journey to Jupiter, HAL as their own creation turns out to be imperfect. That means human beings are incomplete too.

The murders are not caused by unfavourable dimensions of technology, but by HAL's limitations as a fallible being. The description of HAL's highly advanced performance and his contrasting "insanity" accentuates not only his humanness and incompleteness but also the perfection of the monolith creators. The monolith has waited for mankind on the moon for four million years without any technical troubles.

2-3. Jupiter and Beyond the Infinite

The last sequence is entitled *Jupiter and beyond the Infinite*. It starts with a picture of the orbital conjunction again: Jupiter, its satellites, and the monolith in alignment. As previously mentioned, Kubrick indicates that a dramatic evolution of man will take place by showing the image of heavenly bodies in alignment. In the next moment, as the camera pans upward, Bowman's space pod suddenly goes in through the kaleidoscopic Star Gate. On the way to somewhere in the universe, the marvellous and almost magical scientific ability of the monolith creators are astonishingly shown by

the striking and dazzling images of the inside the Star Gate.

After passing through the Star Gate, Bowman is inside of the space pod and on the floor of a rococo-style room. He steps out of the pod and walks into the room. Bowman finds himself getting older in the mirror. Then he sees himself, much older, having a meal alone in the next room. At the moment that the senior, dining Bowman senses someone's presence, the younger Bowman at the entrance of the dining room disappears all at once. When the old man is back at his table, he drops a glass and it shatters. Then a man who is on his death bed comes into his eyes. The monolith appears abruptly in front of dying Bowman and in that instant the eating Bowman vanishes into thin air. Bowman on the bed reaches out his hand and points at the monolith. Last of all, he transforms into a foetus, with his eyes slightly bigger than an ordinary child's. As *Also sprach Zarathustra* is performed loudly, the Star-Child floats before the earth and the film comes to the end.

Clarke advocates a heuristics, called "Clarke's Law" that explains empirically the things regarding science and technology. The First Law is: "When a distinguished but elderly scientist says that something is possible, he is almost certainly right. When he says it is impossible, he is very probably wrong." The Second Law is: "The only way of finding the limits of the possible is by going beyond them into the impossible." The Third Law is: "Any sufficiently advanced technology is indistinguishable from magic." Interestingly enough, the Third Law can be applied to the monolith creators.

Their ultimately developed scientific technology can be calculated easily from finesse of the monolith on the moon. When the dimensions of the monolith are checked with great care, they are found to be in the exact ratio 1 to 4 to 9, the squares of the first three natural numbers, namely 1²: 2²: 3². The entire technology of earth cannot shape any things with such an unthinkable precision.³⁶⁾

Moreover, the creators have built not only the Star Gate as a warp machine but also the Louis XVI room which can extract Bowman's memories, reconstruct them, and change him into the Star-Child.³⁷⁾ Furthermore, Clarke explains that the monolith creators have learned to store knowledge in the structure of space itself, and to preserve their thoughts "for eternity in frozen lattice of light."³⁸⁾ Finally, they have become creatures of radiation, free from "the tyranny of matter."³⁹⁾ Certainly, their technology is "indistinguishable from magic" and they are almost God. In fact, Kubrick himself mentions in the interview with Eric Nordern that the God concept, but not any traditional and anthropomorphic one, is at the heart of *2001*.⁴⁰⁾ He has attempted to construct "a scientific definition of God."⁴¹⁾

It is a striking fact that the Star-Child explodes a nuclear satellite at the very end of the novel:

A thousand miles below, he became aware that a slumbering cargo of death had awoken, and was stirring sluggishly in its orbit. The feeble energies it contained were no possible menace to him; but he preferred a cleaner sky. He put forth his will, and the circling megatons flowered in a silent detonation that brought a brief, false dawn to half the sleeping globe.

Then he waited, marshalling his thought and brooding over his still untested powers. For though he was master of the world, he was not quite sure what to do next.

But he would think of something. 42)

According to Jerome Agel, Kubrick had planned the same ending to the novel at first. However, this curtain for the movie was eliminated at the shooting-script stage, because it would have been too similar to the finale of his previous film, *Dr. Strangelove*.⁴³⁾ In the work, despite the American and Russian efforts to avoid the nuclear annihilation, a Russian lethal weapon the "Doomsday Machine" reduces the earth to dust and the film comes to an abrupt end.⁴⁴⁾ Still, Kubrick indicates a hopeful future for mankind with *Also sprach Zarathustra*. The picture of the Star-Child musing thoughtfully before the earth and the triumphant music tell the audience much more than narration or dialog. It is clear that the Star-Child will evolve the whole of humankind and change its history.

It is also important that the Star-Child is paralleled with Moon-Watcher in the novel: "[w]ith eyes that already held more than human intentness, the baby stared into the depth of the crystal monolith, [...] Beyond this moment lay another birth, stranger than any in the past." In comparison with Moon-Watcher's description, "[i] n those dark, deep-set eyes were a dawning awareness --- the first intimations of an intelligence," it is evident that Bowman obtains a capability to evolve the whole of mankind into superior beings which are free from fallibility, just as Moon-Watcher has done with his superior intelligence.

3. A Laughingstock or Painful Embarrassment

"The last German philosopher who passionately sought out God,"⁴⁷⁾ Friedrich Wilhelm Nietzsche, allegorically advocates human evolution from ape to man to *overman* in his work, *Also sprach Zarathustra*:

What is ape to man? A laughingstock or painful embarrassment. And man shall be that to overman: a laughingstock or painful embarrassment.⁴⁸⁾

One critic called 2001 "the first Nietzschean film." Indeed, one can find in the work the progressive view of history as quoted above. The monolith creators are a

counterpart of the *overman*, which is a literal translation of *Übermensch* and sometimes translated as *superman*. In other words, for the creators, mankind and the man-apes are in essence the same, a laughingstock or painful embarrassment.

For instance, the scientists standing before the excavated monolith near Tycho crater remind the audience of the man-apes surprised at its advent, as Marcia Landy points out in her article.⁵⁰⁾ Not only that, Kubrick ironically, or some might say cynically, depicts the man-apes' fight for drinking water in Africa as a persistent human predilection for destruction. Their undressed brutality may force the audience to recall past and contemporary warfare around the world, especially the war in Vietnam.

In 1967, a year before the release of 2001, the situation of the Vietnam War moved closer to a stalemate by the repeated guerrilla operations of the Vietcong. Although it was not water but ideology that the military forces of capitalism and communism fought for in Vietnam, the younger generation and media in general severely criticised the war. For example, irregular military operations such as the My Lai Massacre began to come to light in late 1969, and the *New York Times* denounced the slaughter as "the essence of the American problem" and an "existential evil" in an article entitled *The American as Blind Giant Unable to See What It Kills*, ⁵¹⁾

Moreover, the 1962 Cuban Missile Crisis was still fresh in the memory of audience in 1968. Although the world had barely missed nuclear annihilation, the Cold War situation remained tense and volatile. In Kubrick's *Dr. Strangelove*, the main characters such as the officer of the American army or the Russian ambassador in the War Room put their own self interests ahead of the whole of mankind. The key persons were all insane except for the president of the United States.⁵²⁾ Kubrick criticises the irrationality of humankind for self-destruction and cruelly indicates the possibility that the world will go to ruin abruptly, even if the president is sincere and serious-minded.

Finally, Martin Luther King Jr. was assassinated on April 4, 1968, right before the release of *2001*. *Time Magazine* featured the murder in two consecutive issues. One of the articles stated that King's assassination is both a symbol and a symptom of the nation's racial malaise. Robert Kennedy met the same fate in June. *Time Magazine* pointed out that the two assassinations prompted "deep doubts about the stability of America." The cultural and social situation of the late 1960s America was confusing and chaotic beyond all recognition.

It is doubtless that Kubrick conceived of these ways to solve problems with brute force such as with nuclear power, warfare or assassinations as "a laughingstock or painful embarrassment" but also as obstacles that human beings must overcome. Therefore the Star-Child explodes the nuclear satellite in the last scene of the novel. As an *overman*, he prefers "a cleaner sky"⁵⁵⁾ without any ruinous powers. Not only that, even HAL, the ultimate product of the technology in the twenty-first century, is also

"a laughingstock or painful embarrassment" for the monolith creators, because of his human incompleteness. For them, humankind and HAL are "something that is to be surpassed." $^{56)}$

Kubrick intended to compare mankind in the 1960s with the monolith creators to show the limitations of human beings which are derived from their destructive and fallible nature. Human beings were astonishingly imperfect, even if they were about to reach the adjacent heavenly body within a year, the lunar landing of Apollo 11 on July 20, 1969.

Nevertheless, the drastic human evolution achieved by Bowman's rebirth removes pessimism from 2001 and makes it an optimistic work. The hope, the essence of the optimism in 2001 is that mankind is on a linear and progressive way from man-apes to the monolith creators. That means this miserable, violent, and uncertain world in the 1960s is not an unbreakable limitation which mankind may never surpass: the world and even human beings can advance to the level of the monolith creators in the distant future.

4. Beyond the Infinite

In an interview with Nordern, Kubrick speaks up about his perspective on the future of human beings and their science and technology. The breadth of the topic indicates his enthusiasm and interests for the year of 2001 to come: exceeding the speed of light, genetic science, learning machines, and automation. ⁵⁷⁾

Actually, Kubrick had closely examined the plausible scientific technology of the 21st century to produce *2001*. Technical information and ideas were donated by the following: Aerojet-General Corporation, US Air Force School of Aerospace Medicine, Bell Telephone Laboratories, Boeing Company, Aero-Space Division of Chrysler Corporation, Institute for Advanced Study School of Mathematics, Flight Research Center of National Aeronautics and Space Administration (NASA), General Atomic-Division of General Dynamics Corporation, International Business Machines (IBM), Jet Propulsion Laboratory of California Institute of Technology (JPL), and Lowell Observatory; they are a mere part of the long list.⁵⁸⁾ Kubrick was obviously fascinated with the future and its technology.

The most discussed issue in the interview was about cryogenic freezing, namely hibernation, which is also featured in the movie. Kubrick advocates the significance of such technology and asserts its feasibility to the interviewer: "[w]ithin ten years, in fact, I believe that freezing of the dead will be a major industry in the United States and throughout the world." Actually, a number of organisations attempted to implement freezing programs such as the Life Extension Society of Washington and the Cryonics Society of New York in the 1960s America. According to *The Prospect of*

Immortality published in 1962 by Robert Ettinger, patriarch of Cryonics Institute, the dead will be able to be revived and cured in the future, by applying cryogenic freezing techniques.⁶¹⁾

It can not be overstressed that the idea of the cryogenic freezing rests on a presumption that science and technology will progress permanently: the future technology is for certain advanced than the present one. Furthermore, the presumption is at the core of the optimism in 2001 too: there is a hope for improvement in every possible way because mankind is at the stage of growth and development from manapes to the monolith creators.

In the interview, Kubrick questions Einstein's special theory of relativity, which states that the speed of light is absolute and that nothing can exceed it. It is needless to say that inter-planetary, inter-galaxy space travel would be possible, if the law were broken or hacked. Kubrick does not think that humankind "has penetrated to the ultimate depths of knowledge about the physical laws of the universe." He is also suspicious of "dogmatic" scientific rules because they tend to have a rather short life span. He takes an example which the most eminent European scientists of the early nineteenth century scoffed at meteorites, on the grounds that "stones can not fall from the sky." ⁶⁴⁾

Likewise, Kubrick emphasises that science has made "fantastic"⁶⁵⁾ strides from the 1920s. He mentions that a wide range of killer diseases that were once the scourge of mankind, from smallpox to diphtheria, have been virtually eliminated through vaccines and antibiotics within a brief period of time.⁶⁶⁾ Moreover, heart transplants are almost a viable proposition and organ banks are being prepared to stock supplies of spleens, kidneys, lungs, and hearts for future transplant surgery.⁶⁷⁾ Thus, he concludes that those who dismiss ideas such as hibernation should take a searching look at what human beings have accomplished in a few decades and ponder what they are capable of accomplishing over the next few centuries.⁶⁸⁾

In fact, a great deal of the historical evidence supported his opinion in the 1960s. For instance, it did not take long before computer technology started overwhelming the world. In 1936, a British mathematician Alan Turing introduced an imaginary machine which can automatically "compute" numbers in his paper, *On Computable Numbers, with an Application to the Entscheidungsproblem,* and the history of computer science began. Cryptanalysis and orbital calculation accelerated its progress. In the Apollo Program which was executed from 1961 to 1972, the computer on Lunar Module which landed on the lunar surface calculated various data from the Earth about controls, guidance, navigation, and radar systems used for each maneuver, and successfully led the astronauts to the Moon and returned them safely to the Earth.

Kubrick's optimism that science and technology will progress and hence improve

the life of mankind is not necessarily radical and unique. F. C. Durant III, assistant director of National Air and Space Museum of Smithsonian Institution, states in the unused prelude of *2001* that the possibilities of utilising machine intelligence in the future are immense. Based on 1960s technology, he continues that mankind will develop more complex machine intelligence and will learn to instruct such machines to perform routine acts and teach them how to make simple judgments. He also predicts that it is even possible to imagine that more rational decisions might be made by a machine, which brings up the interesting possibility of turning over certain state decisions to the machines.⁷¹⁾

In a short space of time, scientific technologies, industries, and engineering of all sorts achieved explosive growth such as medicine, chemistry, computer science, telecommunication, automobile and aviation. Surprisingly, it took only 12 years to bring about a lunar landing after the launch of the first man-made satellite Sputnik 1 on October 4, 1957 by the Soviet Union. In the 1960s, it must have seemed that the progress would go on permanently. That is why the moon is a mere crossing point in 2001: the destination of *Discovery One* is *Jupiter and Beyond the Infinite*. Likewise, HAL is plausible in the imaginary year of 2001. It was the ceaseless advancement of science and technology in the 1960s America that gave birth to Kubrick's historical perspective toward the hopeful future and 2001: A Space Odyssey.

5. Conclusion: Overcoming Human Nature

In 1872, painter John Gast completed his work, *American Progress*, which portrays Goddess Columbia, personification of America itself, leading pioneers of the West and the transcontinental railway, holding a book and a telegraph wire in her hands. The drawing expresses a historical belief called Manifest Destiny which asserts that the territorial expansion of the United States on the North American Continent is destined and justified by God. The reason why the book and the wire are depicted in the work is that a large portion of people regarded them as appropriate symbols for the territorial aggrandizement and believed that the expansion of the American territory could not be accomplished without technologies and industries. In other words, the American progress meant not only expansion of territory but also advancement of science and technology in the period.

The idea of the monolith creators as transcendent existence is reminiscent of Goddess Columbia. 2001: A Space Odyssey is nothing but a product of the progressive view of history just as seen in American Progress. The monolith creators define, shepherd, and encourage human beings not only to pioneer the space frontier, but also to progress in every possible way with their highly scientific powers. They do not destroy the civilizations of the Earth, but instead teach humankind that it is able

to overcome their destructiveness and fallibility; they are final destination for the earthling from the teleological perspective held by America. It is the monolith creators themselves that make 2001 an optimistic work.

In the interview with Nordern, Kubrick states that he was dealing with the inherent irrationality of humankind that threatens to destroy itself in *Dr. Strangelove*. That irrationality remains strong, and must be conquered. But, he continues, recognition of insanity does not imply a celebration of it, nor a sense of despair and futility about the possibility of curing it. "In the deepest sense," Kubrick believes "in man's potential and in his capacity for progress."⁷²⁾

Obviously, this potential and the capacity for progress is not only about science and technology but also about conquering human nature. *Dr. Strangelove* and *2001* are intertwined. The former describes the end of human race, while the latter explains the beginning of a new race beyond mankind. The different endings between the two works derive from their different perspectives toward vanquishing human nature: pessimistic or optimistic. However, *2001* does not suggest any concrete way to accomplish "progress." It is open ended and solutions are left to the viewers.

Without the monolith creators, it is difficult to be optimistic in the beginning of the real twenty-first century, when war and violence still exist as before. Indeed, the global context seems to be worse than the 1960s. Especially, the situation regarding science and technology has changed remarkably for more than 40 years after the release of 2001. Mounting interest in environmental problems is one of the most significant differences.

Rachel Carson sounded a warning as early as 1962, identifying DDT as a cause of environmental destruction in her work, *Silent Spring*, but it did not seize public attention at first.⁷³⁾ The issue gradually became recognised through the 1960s, and the first Earth Day was held on April 22, 1970 to disseminate the problem. According to the *New York Times*, rallies involving up to 25,000 persons took place in New York, Philadelphia, Chicago and other major cities.⁷⁴⁾

It is ironic that many of the Apollo astronauts, their feat heralded as a victory of technology, began to hold critical feelings towards that very technology, after having seen the whole earth from the moon. They unanimously exclaimed how precious life is on the earth.⁷⁵⁾ If environmental problems had gained more awareness in the 1960s, Kubrick might have included the issue as an undesirable outcome of human nature, and *2001* may have been differently expressed.

When recalling the characters in *Dr. Strangelove*, we see they are preoccupied with seeking short-term selfish interests. If the irrational, destructive, and fallible nature of human beings shown in *Dr. Strangelove*, 2001, or in environmental issues is a product of our genes, there may be no solution. However, mankind can "discuss

ways of deliberately cultivating and nurturing pure, disinterested altruism"⁷⁶⁾ which overwhelms irrationality, "something that has no place in nature, something that has never existed before in the whole history of the world,"⁷⁷⁾ as Richard Dawkins noted. In fact, human beings have succeeded in reducing the "bone-weapon," nuclear armaments and the possibility of the annihilation without the help of the monolith creators. Nurture, knowledge, or enlightenment symbolised in Dr. Floyd's floating pen is one possible answer to conquer the fallible nature of our species.

Notes

- 1) Penelope Gilliatt, "After Man," The New Yorker Magazine, April 13th, 1968, 150.
- 2) Jerome Agel, "Photo Captions," in *The Making of Kubrick's 2001*, ed. Jerome Agel (New York: The New American Library, 1970), 210.
- 3) Arthur C. Clarke, 2001: A Space Odyssey (New York: Roc, 1991), 29.
- 4) Charles Champlin, "From the Los Angels Times," in *The Making of Kubrick's 2001*, ed. Jerome Agel (New York: The New American Library, 1970), 215; Tim Hunter, Stephen Kaplan and Peter Jaszi, "From the Harvard Crimson," in Ibid., 216; Louise Sweeney, "From the Christian Science Monitor," in Ibid., 227; Marcia Landy, "The Cinematographic Brain in *2001: A Space Odyssey*," in *Stanley Kubrick's 2001: A Space Odyssey*, ed. Robert Kolker (New York: Oxford University Press, 2006), 88.
- 5) Barton Palmer, "The Critical Reception and the Generation Gap," in Ibid., 13-14.
- 6) Renata Adler, "The Screen: '2001' Is Up, Up and Away," New York Times, April 4th, 1968, 58.
- 7) "New Movies: 2001: A Space Odyssey," Time Magazine Asia Edition, April 19th, 1968, EA4.
- 8) Palmer, "The Critical Reception and the Generation Gap," 13-27.
- 9) Maurice Rapf, "A Talk with Stanley Kubrick about 2001," in Stanley Kubrick: Interviews, ed. Gene D. Phillips (Jackson: University Press of Mississippi, 2001), 76.
- 10) Mike Steele, "From the Minneapolis Tribune: Involvement is the message," in *The Making of Kubrick's 2001*, ed. Jerome Agel (New York: The New American Library, 1970), 261.
- 11) William Kloman, "In 2001, Will Love Be a Seven-Letter Word?," New York Times, April 14th, 1968, 15.
- 12) Jerome Agel, "The Missing Links?," in *The Making of Kubrick's 2001*, ed. Jerome Agel (New York: The New American Library, 1970), 195-198.
- 13) Arthur C. Clarke, *The Lost Worlds of 2001: The Ultimate Book of the Ultimate Trip "2001: A Space Odyssey"* (London: Sidgwick and Jackson, 1972), 76-77; Jerome Agel, "Interview with Norman Lamm," in *The Making of Kubrick's 2001*, ed.

- Jerome Agel (New York: The New American Library, 1970), 55-57.
- 14) Jerome Agel, "Good Stuff," in Ibid., 292.
- 15) Eric Nordern, "Playboy Interview: Stanley Kubrick," in *Stanley Kubrick: Interviews*, ed. Gene D. Phillips (Jackson: University Press of Mississippi, 2001), 47.
- 16) Clarke, The Lost Worlds of 2001, 30-40.
- 17) Ibid., 126-127.
- 18) 2001: A Space Odyssey, DVD, directed by Stanly Kubrick (Warner Brothers Pictures, 2004). Henceforward, this DVD version is followed unless otherwise noted.
- 19) Agel, "Photo Captions," 80.
- 20) Clarke, 2001, 4.
- 21) Ibid., 25.
- 22) Ibid., 76-78.
- 23) Champlin, "From the Los Angels Times," 215; Hunter, Kaplan, and Jaszi, "From the Harvard Crimson," 216; Sweeney, "From the Christian Science Monitor," 227; Landy, "The Cinematographic Brain in 2001: A Space Odyssey," 88.
- 24) Yasuki Hamano also sees the floating pen as an offspring of the bone. Based on this idea, he has interpreted *2001* as Kubrick's view in relation to media, referring to Marshall McLuhan. 浜野保樹『キューブリック・ミステリー』(福武書店, 1990年), 14頁.
- 25) Clarke, 2001, 30.
- 26) Kubrick, 2001: A Space Odyssey.
- 27) Ibid.
- 28) Ibid.
- 29) Stephen Mamber, "Kubrick in Space," in *Stanley Kubrick's 2001: A Space Odyssey*, ed. Robert Kolker (New York: Oxford University Press, 2006), 55.
- 30) Michael Mateas, "Reading HAL: Representation and Artificial Intelligence," in Ibid., 106; Landy, "The Cinematographic Brain in 2001: A Space Odyssey," 88; Gilliatt, "After Man," 150.
- 31) Hunter, Kaplan, and Jaszi, "From the Harvard Crimson," 220.
- 32) Daniel Keyes, Flowers for Algernon (New York: Bantam Books, 1984).
- 33) Clarke, 2001, 151-152.
- 34) Ibid., 173.
- 35) Clarke, The Lost Worlds of 2001, 189.
- 36) Clarke, 2001, 173.
- 37) Takayuki Tatsumi sees the monolith, the Star Gate and the Louis XVI room, as a "cyber-space computer." 巽孝之『『2001年宇宙の旅』講義』(平凡社, 2009年), 59-65頁.
- 38) Clarke, 2001, 196.
- 39) Ibid.
- 40) Nordern, "Playboy Interview: Stanley Kubrick," 48.

- 41) Ibid.
- 42) Clarke, 2001, 236.
- 43) Agel, "Photo Captions," 164.
- 44) Dr. Strangelove or: How I Learned to Stop Worrying and Love the Bomb, DVD, directed by Stanly Kubrick (Sony Pictures Entertainment, 2003).
- 45) Clarke, 2001, 236.
- 46) Ibid., 4.
- 47) Martin Heidegger, *Die Selbstbehauptung der Deutschen Universität* (Tokyo: Buchverlag Daigakushorin, 1934), 19: "der leidenschaftlich den Gott suchende letzte deutsche Philosoph, Friedrich Nietzsche"
- 48) Friedrich Wilhelm Nietzsche, *Thus Spake Zarathustra: A Book for All and None*, translated by Thomas Common and revised by Oscar Levy and John L. Beevers with an introduction by Dr. Oscar Levy (London: Allen & Unwin, 1967), 67.
- 49) Nordern, "Playboy Interview: Stanley Kubrick," 48.
- 50) Landy, "The Cinematographic Brain in 2001: A Space Odyssey," 93.
- 51) Robert Jay Lifton, "The American as Blind Giant Unable to See What It Kills," *New York Times*, January 14th, 1970, 2-3.
- 52) Kubrick, Dr. Strangelove.
- 53) "An Hour of Need," Time Magazine Asian Edition, April 12th, 1968, 15-16.
- 54) "For Perspective and Determination," *Time Magazine Asian Edition*, June 14th, 1968, 7.
- 55) Clarke, 2001, 236.
- 56) Nietzsche, Thus Spake Zarathustra, 67.
- 57) Nordern, "Playboy Interview: Stanley Kubrick," 48-74.
- 58) Jerome Agel, "Largesse," in *The Making of Kubrick's 2001*, ed. Jerome Agel (New York: The New American Library, 1970), 321-324.
- 59) Nordern, "Playboy Interview: Stanley Kubrick," 61.
- 60) Ibid., 62.
- 61) Robert C. W. Ettinger, "The Prospect of Immortality," *Cryonics Institute, A Non-profit Organization*, (Retrieved on September 28th, 2017), 11. http://www.cryonics.org/bookl.html
- 62) Nordern, "Playboy Interview: Stanley Kubrick," 59.
- 63) Ibid.
- 64) Ibid.
- 65) Ibid.
- 66) Ibid.
- 67) Ibid.
- 68) Ibid.

- 69) Alan Turing, "On Computable Numbers, with an Application to the Entscheidung-sproblem," in *The Essential Turing: Seminal Writings in Computing, Logic, Philosophy, Artificial Intelligence, and Artificial Life plus The Secrets of Enigma*, ed. Jack Copeland (Clarendon: Oxford University Press, 2004), 58-90.
- 70) Gene Kranz, Failure Is not an Option: Mission Control from Mercury to Apollo 13 and beyond (New York: Berkley Books, 2001), 215, 268-269.
- 71) Jerome Agel, "Interview with F. C. Durant, III," in *The Making of Kubrick's 2001*, ed. Jerome Agel (New York: The New American Library, 1970), 39.
- 72) Nordern, "Playboy Interview: Stanley Kubrick," 68.
- 73) Rachel Carson, Silent Spring (Boston: Houghton Mifflin, 1994).
- 74) Gladwin Hill, "Activity Ranges from Oratory to Legislation," *New York Times*, April 23rd, 1970, 1.
- 75) In the Shadow of the Moon, DVD, directed by David Sington (THINKFilm, 2007).
- 76) Richard Dawkins, *The Selfish Gene* (New York: Oxford University Press, 1999) 200-201.
- 77) Ibid., 201.

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く要旨>

スタンリー・キューブリックによる映画『2001年宇宙の旅』は、極めて楽観主義的な寓話である。これまでの批評家の殆どが、この作品において描かれる科学・技術の負の側面に着目してきた。例えば、人類史上初の殺人者となる<ヒトザル>、人工知能<HAL>による反乱、そして地球を周回する核兵器搭載の人工衛星についてなどである。

しかし、この作品を注意深く鑑賞すれば、これらの負の側面は科学・技術それ自体ではなく、むしろ人類の可謬性によって齎されたものであることが判る。キューブリックは、人工知能<HAL>でさえ免れない可謬性を我々人類が乗り越えるべき壁として描き、最終的に人類はモノリスとその創造者らの手助けにより、新たなる種へと進化することになる。『2001年宇宙の旅』は科学・技術のメリットやデメリットについてではなく、人類が可謬性を克服することについて描いているのである。

この楽観主義は、キューブリックが思い描いた人類の未来像に由来している。彼は、科学・技術は永続的に発展し、それ故に人類の未来も楽観的に保証されるという信念を抱いていた。より踏み込んで言えば、彼の楽観主義は確かにナイーヴではあったが、当時としては、決してユニークなものでも無根拠なものでもなかった。1960年代アメリカの時代精神こそが、この作品を楽観主義的なものにしたのである。