



*Photo credit: wiki(2021)*

*Movie name:*       **Prometheus**

*Length:*               *124 minutes*

*genre:*                 *Science Fiction/ Thriller/ Adventure*

*Production Country/Region:* *United States / United Kingdom*

*Director:*             *Ridley Scott*

*Screenwriter:*       *Damon Lindelof / Joe Spatz*

Prometheus, as a prequel to the alien world, is set in the 21th century. In the story, Doc and his party take the Prometheus spacecraft to the exoplanet in search of the human creator, who is also known as the "engineer" some huge extraterrestrial humanoid. But the creator did not find, the doctor

and a group of people into the surface of the planet, found artificial traces of sand dunes and pharaohs tomb like buildings, in the underground travel tomb, we accidentally found black water, which is an organic biological liquid. Black water is encapsulated in the jar, when someone close, will be released overflow, and once there are organisms contaminated with this organic biological liquid, will produce strong variation.

A drill body reptile with acid blood burrow into the mouth of the biologist and kills him. At the same time, the acid blood of the reptile also burns the geologist's helmet, causing the geologist to choke some black water when he falls down... This makes the geologist in the strong mutation, became the body distorted skull protrusion of the gorilla monster, then it returned to the bottom of the ship to kill, the crew only after several twists and turns will be hard as iron monster killed. But there is more to Blackwater than that.

Robot David, is on the spaceship Prometheus to take care of the crew of the housekeeper. But in order to ascertain the blackwater, David unexpectedly privately bring blackwater jar, and the black liquid droplets down to the Japanese husband's cup test, then knowing her husband had intercourse with Japanese. She was killed by the crew after her husband variant, and she born a foreign body in the medical room. They found that the black water is a biological weapon "engineers" study, but the black water is the so-called move stone drop one's foot playing with fire. Immediately after the crew to leave this dangerous place, David in the grave underground disc cockpit to find the survivors of the "engineer", after the controversy or decided to see the engineer. However, the "engineer" is not friendly,

he destroyed most of the crew, and drive the hidden in the tomb of the alien spacecraft from the underground rise. the alien ship carrying countless black water jugs, destined for the earth, it seems that the "engineer" developed black water is exactly to destroy their creation - human beings.

To stop the alien spacecraft, Prometheus crashed, bay was the only survivor. She will "engineer" into the monster mouth, successfully escape. The starfish monster will parasitic eggs in the "engineer" body, giving birth to the Alien series of classic monster.

## AI technique/method/devices/application in Prometheus

### (a) robot with free will

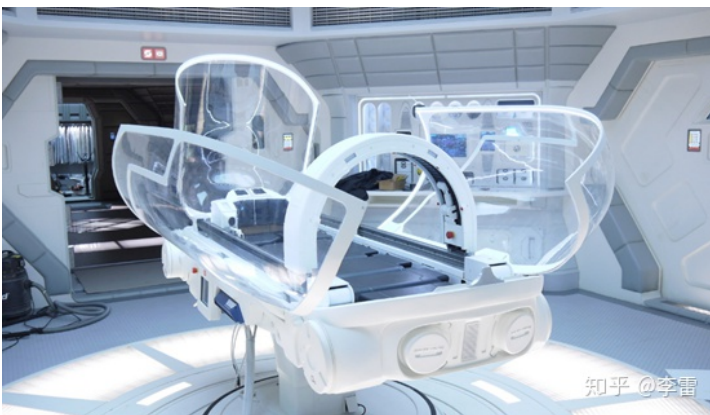
In prometheus, David, as a robot, develop "self, insecurity, jealousy and envy" . In the movie, David deliberately mixed a little black liquid into the drink and gave it to the unsuspecting Holoway to drink it. As a result, Dr. Elizabeth Shaw gave birth to the alien that killed the engineer which led to the proliferation of aliens. Absolutely, David could be recognize as strong AI, which means David has mental capabilities and functions that mimic the human brain. David can learn almost unlimited knowledge. David can easily learn the language of engineers that have been lost on the earth. He alone can control the entire spacecraft for up to 2 years, and he can use any kind of equipment proficiently. Also



Photo credit: wiki(2021)

David did not obey “three laws of robotics” whose second rule stipulates that robots should not harm humans. Such AI related issue is also the question that Prometheus wants to explore.

### (b) intelligent medical robot



*Photo credit: movie:prometheus(2012)*

Complex surgical procedures can be performed in a minimally invasive manner through an integrated imaging system, a control platform, and a robotic arm system. Such thing have been achieved in prometheus. The intelligent medical robot could firstly directly using pattern recognition procedure to recognize the situation about human. Then it could generate

surgical plan(probably like an expert systems—matching with the database...) and complete all the work of nurses and doctors with robotic arms.

### (c) Tunnel scanning robot

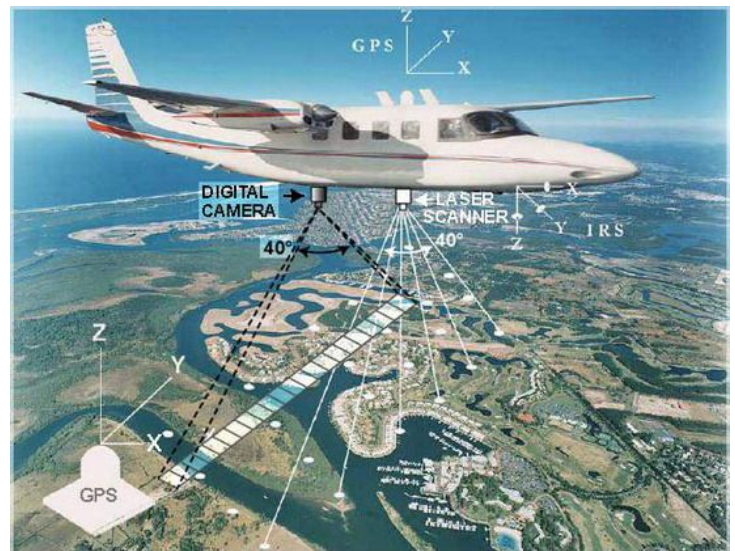
Different from other robots, tunnel tanning robot only have two function:fly and scan. But behind it, AI technology could obviously be seen. In this movie, tunnel scanning robot could fly automatically and no collision happens which seems nowadays driverless technology. In driverless technology, sensors sense road conditions and surrounding conditions, and then transmit them to the CPU. The CPU judges the situation according to artificial intelligence, and

then informs the telex system, which controls the mechanical device according to the signal, and finally the mechanical device controls the vehicle to perform various actions. Also, such a robot could draw a 3D all-terrain map which also use AI method (data to picture) to draw.

## The realistic prediction of AI development in the movie

### (a) Terrain detector (tunnel scanning robot)

In fact, such thing could be achieved and realize industrial production in real life. According to a report talking about “kinect2”, the 3D scene in front of the camera is drawn by calculating the time of the invisible light to be emitted and returned which finally achieve such a function. However, we could not use such a small red ball but drone to replace.



### (b) intelligent medical robot

Obviously, nowadays almost all the country that has the ability to examine AI put their effort in combining AI with medicine. Nowadays AI in CDSS (clinical decision support system) could be possible, but AI in surgery itself could not be possible nowadays. In Q&A section happening in Shanghai AI forum meeting, experts give us some of these answers about the feasibility of AI in the medical field.

Does AI need emotion? No, only an emotionless robot can remain as objective as possible. There's emotion That's the plot of a movie. It has nothing to do with scientific research.

Does AI diagnostics rely on the disease library? Disease database = expert system, strong subjectivity, too many rules, difficult to edit, and will not take the initiative to grow, the current algorithm generally do not use expert system.

How does AI diagnostics work? If one day the world all of the hospitals are loaded on the system, so every global generate hundreds of millions of cases and their treatment by doctors (these are), historical data is numerous, the most simple diagnostic method is to find out exactly the same or similar a few cases the same diagnosis is given. However, AI cannot be so simple. He can



constantly learn knowledge from it and push down the internal probability and correlation knowledge.

About timeliness: As you can imagine, as long as the number of cases increases every day and the AI learns the cases, timeliness is not considered at all.

On the complexity of development: we just need to develop a universal system for learning cases, without having to develop it for every disease, which is not complex in the medical sense.

Does the AI need to test more than ten items? Don't need. An automatic diagnostic algorithm does not necessarily require all dimensions of data.

Otherwise you won't have to die. If there is a high degree of uncertainty, you will continue to be given a test. This is a bit like the Q20, the human-cube mind-reading robot. You can try this robot, and the process of automated diagnosis will be very similar in the future. Probability is inborn, not after you test it. It's more accurate after the tests. But if the certainty is already 95 percent before the test and 99 percent after the test, then the test is probably not necessary.

So we could say that such a robot is the realistic prediction of AI development in the future.

(c)David—humanoid intelligent robot

In the movie, David can learn almost unlimited knowledge. David can easily learn the language of engineers that have been lost on the earth. He alone can control the entire spacecraft for up to 2 years, and he can use any kind of equipment proficiently. Such thing could not be achieved nowadays because there are no such strong model and arithmetic to support the intelligent robot act as intelligent as David. But in the future, as the development of AI become more and more perfect, it must appear in human's life.

## **The philosophical issues in the movie**

Actually, it is the philosophical issues in Prometheus that runs throughout and that makes Prometheus attractive and provocative. There are some philosophical issues that will be discussed below.

(a)where are we from

This should be the ultimate philosophical proposition that both Chinese and Western philosophies are fond of talking about and almost inconclusive in history. nowadays the scientific community generally agrees with Darwin's theory of evolution. The content of this hypothesis mainly covers four aspects: evolution theory, common ancestor theory, natural selection theory and gradual change theory. Among them, the "common ancestor theory" holds that: the common ancestor refers to the ancestors of a group of organisms, which can refer to a specific group, but also can refer to all the living things on the earth. This particular group, or all life on Earth (including humans), descended from the common ancestor from which all living and extinct life on Earth derives. This common ancestor is called "Luca" (the last universal common ancestor). Both the common ancestor thought in ancient naive materialism philosophy and the "common ancestor theory" advocated by Darwin belong to the category of "meta-narrative" in the view of post-modernists. So prometheus comes.

According to the movie Prometheus, the origin of human is as follows: The giant "engineer" came to the ancient Earth from the distant planet LV-223 (or the parent planet). At that time, although the Earth had developed organisms through its natural ecology, the level of organisms was not high. They were just elementary and low plants, not enough to generate advanced organisms such as human beings. Giant "engineers" by drinking their developed Black water (Black Goo, similar to the substance that causes biological gene disorder changes), disrupted and decomposed their own genes, and combined with the ancient water elements on the earth to create a new form of life: the rudiments of human.

The movie gives such a bold setting that makes viewer thinking in the universe point, which also led viewer explore more about human origin.

(b)what will happen when AI develop

In the movie, the story shows us why engineers create and destroy human: In more than thirty thousand years ago, the engineer drank black material, the diffusion of the genetic information of life in the earth's rivers, eventually created the human, actually they create the human and the human creation robot's original intention is the same, because the human science is physical properties, so life is robot to guide human creation of science and technology, and the science is biological neural engineers, So they created the human, its purpose is to help yourself better work or research and development, it's a pity that the creator eventually lose control to be the creator, human science and technology seems to be on the verge of going beyond the engineer, and

biochemical people beyond the capacity of the human, so they all want to fault correction made in the past, to end their threat to humans.

This could also explain why we fear AI—we fear that AI will bring threat. In fact, Prometheus take us some possibilities about future AI. David, for instance, extinct human and creator engineer.

This intelligent robot David is created by the human Doctor old man, the original intention is to serve human beings, can become a partner. But why did David end up destroying both of the creatures who created him directly and indirectly?

Here, in fact, the film expresses the cruel truth, that is, the creator engineer does not regard the earth human beings as a kind of life, just as an experimental product; And human beings also do not regard intelligent robot as a life, just a tool.

The result of this logic is the demise of the world of human beings and the Creator.

If AI has emotion, at the beginning of the birth of AI intelligent robot, if human beings treated as friends and partners, rather than arrogant posture, will AI intelligent robot betray human beings?

At present, though, the level of AI may be limited to specific specialized fields, such as research, finance, education, gaming, and driving. At present, it is very difficult for humans to defeat the intelligent AI of Go, which is the representative of AlphaGo

In the foreseeable future, it is inevitable that humans will create AI intelligent robots similar to David in Prometheus. So should we treat them as companions, so that they can be our loyal friends?

When artificial intelligence has the idea and ability to discover the origin of life itself, as humans do now, what kind of cycle it will be will depend on what causes people to plant and what results they bear.

To borrow a sentence from "The Three-Body Problem"—"Weakness and ignorance are not the barriers to survival, arrogance is!"

### **Major modifications** based on the current AI development

- (a) In the movie, Prometheus spaceship crashed into Engineer spaceship. But such a heroic act makes people pitiful. Since nowadays driverless technology has been more and more perfect, why in the future spaceship could be piloted without a pilot? So maybe we could let the Prometheus

automatically crash into the engineer ship without sacrifice. Also, such a modification could also change David way to engineer's home (2513 words)

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