



**SURVIVAL OF MARK WATNEY ON MARS AS A  
CHALLENGE IN THE SCIENCE FICTION THE MARTIAN**

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**Abstract:**

Science fiction reveals the world with full of imaginations and futuristic ideas about betterment of human life. While talking about the genre of science fiction, it shows courageousness and risk-taking challenge of the situation. Many science fictions have been laid on Mars by author's imaginative power, creating life's possibility, has raised human interest more day by day. It seems possible to place ourselves on Mars with the success of science. Working with the problems from the beginning NASA has always been trying to send mission on Mars. Sometimes they remained failure also still they sought continuously. This study aims to see survival of Mark Watney on Mars. How does Mark Watney struggle for life? And How does he resolve his problems on Mars? This fiction explores Mark Watney's scientific ideas and also humanistic characteristics throughout. It also poses the responsibility of human being in account of the science when situation gets complicated while dealing with the mission that explores human ideology and morality. We include here study of Andy Weir's science fiction The Martian, confronting challenges and risk-taking situation of Mark Watney.

**Keywords:** challenges, human ideology, resolving problems, science fiction, struggle, survival

**Introduction**

Exploring the science fiction, it covers a lot of facts about the science and also deals with writer's imagination that may give us hope for future. Many science fictions elucidates the life on Mars. In fact people have tried to colonize the Mars, for instance Stanley Robinson's Red Mars, illustrates the humans effort to colonize the society on Mars. We have always expected to resolve the mystery of the universe, seeking for the newness. As a result many missions have been taken place. Peculiarity of the science fiction is challenge or risk that leads a man towards adventure and here Mark Watney who is trying to overcome with the problems on Mars when he was left by his crew members. He uses his philosophy and scientific ideas with new hope to survive on Mars.

Survival as a challenge for Watney in The Martian



Andy Weir's *The Martian*, originally published in 2011 and re-published in 2014, took place in the year 2035, deals with the genre of science fiction. It goes with the detail account of Mark Watney's survival on Mars, who is a botanist and mechanical engineer, stranded alone on Mars and how he improvises his situations and problems in order to survive in Mars with the hope of next mission. Mark Watney struggles to live in Mars as he was left by crew members of Ares 3 Mission. Actually, NASA has sent six astronauts to Mars and planned to stay for a month but unfortunately, there came sandstorm, as a result mission commander Melissa Lewis, following the orders of NASA, has decided to leave Hab and take off. During this crucial time, Mark Watney's EVA suit was punctured by antenna wire and flung outside from Hermes. He was presumed as dead by crew members so they left without finding him. When he was thrusted in storm, he was alive. He got injury and after high oxygen warned made him awoke, he remembers the face of Johansen hopelessly. Now, he has to live alone on Mars up to next mission that is after four years. He thought that his crew members may feel guilty to leave him on Mars when they'll come to know that he is alive. In order to survive on Mars, Watney needs life support stuff food, water, and oxygen. Mar's environment differs from Earth so he needs air to breathe. He reached to the Hab to stay. The Hab is designed to deal with storms at a speed of 150 kph. He was injured so he stitches to body. After his recovery of the wound, he thought about his situation as no way to communicate with the Earth or Hermes. Analysing the situation, he thought, if he will not try to face the problems of food, water or oxygen, he'll die. So he decided to work the problem. He made video log, where he described everything as he has to wait for four years for next mission that will be landing at the Schiaparelli crater, far 3200 km from him and for that he needs every primary basis as one human needs to be live.

He calculated about the food. The mission of Ares 3 should be 31 soles last (sol is Mars Day 24.5 hours) and for the safety, NASA has sent 68 food soles, for six people. For Watney himself, it will last 300 soles, extended to 400 if he can eat three fourth portion per meal. Watney needed 1,500 calories every day. He already had 400 sol of food still he will starve to death. Being a botanist he thought how to get free from this problem for him it's not completely hopeless. It shows human nature of being optimistic for betterment. Fortunately, Watney had a potato supply. He could use his own feces as fertilizer in sterile Mars soil, to grow vegetables. Watney cultivated his garden with his and the crew feces. Watney turned

his attention to long-term planning, where he can grow potatoes. But planting crops on Mars poses a special challenge. First, the sunlight reaching the surface was too weak to grow plants that evolved on Earth. To get around that, Watney needed to plant it indoors under artificial light. After growing potatoes he counted how many Sol he can get calories from this potatoes to survive until Sol 1412.

Watney needed more water than what's left after the storm. Since he has a skilled of science, he tried to sort out this problem also. He needs water to grow up the pieces of potatoes. He found a way to extract hydrogen from hydrazine in rocket fuel to produce more water. So he used chemistry to make water from rocket fuel. However, it took him several dangerous explosions to get the right chemical reaction.

“Then I did it again. And again. Short bursts. Nothing flashy. I was happy to take my time. I was elated! This was the best plan ever! Not only was I clearing out the hydrogen, I was making more water! Everything went great right up to the explosion. (Weir, 2014:43).

It was very risky for Watney but he made it possible and finally resolved the problem of water. It also shows Watney's courageousness and scientific methods to deal with situation.

Mars environment is not very comfortable for humans. So in order to survive from extreme weather and radiation, Watney wore his spacesuit when he went out from hab. The spacesuit was designed with high technology to help astronaut to survive in outer space. He lives on Mars, growing crop and making water now he feels owner of Mars. He thought to communicate with NASA. Watney used a rover to find a Pathfinder probe, transmission in 1997. He hoped to use it to connect with NASA. He dug an old probe out of the sand, scattered the solar panels to charge the battery, and found that it was still working. He started to communicate with handwritten markings for the Pathfinder camera and finally NASA received the message that confirms he is alive. When they found it, they tried to bring him back tirelessly. The crew members also got to know that Watney is alive. They felt guilty to leave him alone. This shows human nature how we are connected to one another with sentiments.

Here the author Andy Weir made it more reliable, describing The Martian in sections, told from Watney's point of view was written as a log entry. Watney hoped that NASA and others on Earth would someday read his notes, even if he died on Mars before help reaches him or without anyone realizing that he was alive, he hoped to leave a record that can be recovered



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by future astronauts. In this way, the structure of the novel itself reveals Watney's innate need to connect with other humans. Later on he was rescued by his crew members of Hermes, once again taking risk from both sides, Crews and Watney.

### Conclusion

Mark Watney with new hope, struggles through out in the novel to survive on red planet. The Martian also explores many facts about Science and how NASA shows responsibility for crew Mark Watney to bring him back on Earth. It credits to humanity how we are social beings when Watney remembers his family on Mars. He never given up on working the problems. He used every possible ways to get rid from the complicated situations. It was challenge for him to survive but being optimistic he puts all efforts of his science skill.

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