Scientific and Technical Challenges of Interstellar Space Travel

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Introduction

Interstellar is one of the best visionary films. The film takes the views on a journey that remains memorable to anyone who has watched it. The journey starts from the dust of dying Earth because of famine to the other side of the universe. The film has a combination of both science and some form of speculative theory. They make the film more real by using real space technology to make it more believable. Nolan Christopher brings out the idea of moving from the Earth to the moon (Nolan, 2014). Moving from Earth to the other side of the universe had so many challenges that the individuals had to undergo to make it a success.

The Technical Challenges Of Interstellar Travel

The film shows many changes that the individuals faced or were likely to face. The appearance of a wormhole comes as a way through to the other side. But even if the wormhole was there, the people did not know how long it would take to move to the other side or what it looked like. They had to move blindly, not knowing how long it would take to reach the other side nor what they were likely to encounter when they reached there.

The issue of huge waves caused by the movement of the planet was also a challenge for spaceships to navigate. With all these harsh conditions, it was difficult for the individuals to cruise safely to the intended destination. To be able to make the waves, the level of technology used in making the ship will be complex and not yet available.

The issue of gravity was also a major setback for them when leaving Earth. The current level of technology that was available would not be able to propel the rocket. This is because gravitational force was pulling the rocket down. The weight of the rocket and the people was heavy. The different anomalies did produce the required amount of fuel to leave Earth. The brand has been working on solving the problem for almost 40 years, but it has not succeeded. He built the rocket, but there was not enough data to bring about equilibrium in the anomalies. Without the rocket, there would be no leaving Earth, and this meant that the human race would perish on Earth.

The issue of a fifth dimension in the universe also proved to be a challenge. If there was another dimension that the Earth's dimension was connected to, then gravity could pass via space. This meant that they might be traveling through the dimension to see different times. There was no known way how the dimensions could be disconnected if they existed.

One of the main challenges was the distance between the stars and even the whole galaxies. It will take decades for people to move from Earth to the universe. The type of technology that they were using could not allow them to cover the distance within the required time. For instance, the nearest star to our planet is the Alpha Centauri star system, which will take 100,000 years and more to reach (Diedrich & Heaton, 2017).

The sun will be another problem for the planet. The planet did not have any stars, and this meant that there was no sun. The only source of light would be the black hole. The black hole will produce light by accretion caused by the disk, but in many cases, they form x-rays, which, in the long run, will burn the planet's atmosphere. Even people the people were running away from the Earth that was dying to be of famine, the other planet was also inhabitable. The X-rays will not allow them to survive for long. They will be moving to another dead zone.

It will also be a challenge for the rocket to land on the planet. Landing will require doing it without any orbiting. Any orbiting near the black hole will send the rocket into the hole or beyond the horizon. Also, leaving the planet will be a challenge because of the black hole. One has to get a high-velocity escape that will require a lot more fuel than the one that will be used during the journey. The people might make a safe journey from Earth, but upon arriving at the planet, they all perish due to the landing problem. The best thing they can do is plan everything before the journey and have the technical know-how on landing.

The problem of the impact from space debris also causes a huge challenge during the trip. There is a very high risk of even losing the rocket because of collisions. Any mechanical problem caused by the ship might lead to important issues, such as being exposed to ionizing radiation. The current technological advancements do not give the best solution to the problem. The individuals leaving Earth to look for a better place had to endure the challenge since there was no other option (Mazanek, Merrill, Brophy, & Mueller, 2015).

Conclusion

The film depicts all the challenges that an interstellar travel mission encounters. Some of the challenges shown have solutions that have not yet been found. Deeper scientific research needs to be done to overcome such challenges. We should all be prepared since this might happen in the future. Good preparation will enable us to have an easier journey to a better universe.

References

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