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## Technological Progress and Human Identity in Isaac Asimov's *Pebble in The Sky*

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### Abstract

Literature and society are interwoven intrinsically. Science fiction writers foresee and write about the futuristic condition of the world. The main aim of the science fiction writers is to instruct the people that they are the victims of the political, social, economic and cultural impacts in this world. Isaac is one of the renowned science fiction writers. He has many ideas about future life and he displays the themes of technological progress and its implications on humanity. He wants scientists to find better sources of energy and wishes that people should take better care of the environment around them. His stories try to anticipate the impact of the future technological developments of society. This paper tries to explore the environmental issues of modern era in the relation to Isaac Asimov's *Pebble in the Sky*.

Technology has become the greatest gift to humanity. One cannot imagine the world without science and technology. Scientific inventions and discoveries are happening every day and technology is the application of those to make life easier. One cannot imagine a world without all these advancements of science. Today, it has become a necessity of life. Science and technology are interwoven with human lives. The advancements in several fields such as medical science, transportation, communication, education, media etc. has completely changed our lives and it continues to advance every day. There is always a point of debate, whether technology is a boon or bane! Like a coin having two sides. It depends upon the user. Asimov says 'Science fiction is like a telescope that looks into the future'. It allows people to imagine how the future will be. Generally, Science fiction writers predict

the possibilities of the problems which may arise in future due to the rapid development of science and technology. Atomic power, automation of machines and space colonization are some of them. He has also hinted solutions by suggesting people to have a balance over the nature and technology.

**Keywords:** Humankind, environment, science, technology, development

Among the modern science fiction-writers, Isaac Asimov has made an impact. He was born on 2<sup>nd</sup> January, 1920 in Petrovichi, as the son of Judah Asimov and Anna Rachel Berman Asimov. When he was three, his family migrated to the United States and settled in Brooklyn, New York. His father owned a candy store and that has become the major influence for him to write his science fiction. Asimov used to complete his school books and started reading books on Greek Mythology such as The Iliad and Odyssey (which influenced him more to write his science fiction). The paintings in magazines, planets, aliens which increased his imagination with new ideas and dreams. He wrote for such magazines and used the money for his education. After his schooling, he did chemistry at Columbia University in 1939 and received his M.A in 1941. During his college education, he started writing his first science fiction story in 1938 and he had a chance to meet John Campbell the editor of Astounding science fiction. He published his short story in 1939 entitled *Marooned off Vesta*. Later he became one of the valued members of Campbell's group of writers. In 1941 Asimov wrote *Nightfall* and it had become the most famous science fiction story of all time. Next his foundation series gave him a turning point in his career.

The two basic human emotions are hope and fear. Both are associated with the future. He used several futuristic advancements technologies in his works. The novel *Pebble In the Sky* he has mentioned about time travel. It is possible in science fictions and in reality, it is beyond the technological capabilities.

In *Pebble in the Sky* he has presented an accidental time travel by a chemical explosion in a laboratory. He has not used any device for travel whereas in *The End of Eternity* he has depicted the time travel and time paradox through a device called kettle. To support the concept of Time of Asimov, Stephen Hawking had stated in his theory that time travel will be possible in the upcoming future. His theory of everything gives many clues about the way time travel and time reversal happen: "Space and time not only affect but also are affected by that happens in the universe without the notions of space and time, so in general relativity it becomes meaningless to talk about space and time outside the limits of the universe" (Hawking 36)

Stephen Hawking states that whatever happens in the universe will affect the space and time. It is evidently viewed by many renowned scientists like Stephen Hawking and Albert Einstein and not only that, he was basically a chemist, so his inner psyche never let him write figment concepts illogically.

The universe has more dimensions, according to scientists, Time is one of the dimensions of it. It is different from place to place and planet to planet, but there is a godly time that exists in a philosophical perspective and it is considered as time flux, which in turn provide many possibilities to travel through black hole. There are empirically impossible concepts of humans of their phenomenal body conditions are highlighted. Asimov has logically narrated this concept two different ways in his *Pebble in the Sky* and *The End of Eternity*.

In Pebble in the Sky Asimov has shown a one way travel of Joseph Schwarz in his sixty years travel. He sings a song of "Rabbi Ben Ezra" while waking but suddenly he is transported into thousand years into the future which caused due to the radioactive effect. Through this he has traveled thousand years into the future. He had been accidentally transported to the distant future due to the nuclear accident in a laboratory. Asimov has stated that time travel is done due to the highest pressure or force. However, H.G.Wells in his Time Machine has shared that time travel is possible only through a machine. Unlike that Joseph Swartz was caught into the radiation force and travelled into time without any machine rather than only by a powerful force. He felt dizzy for a moment and in a fraction of second a whirlwind had lifted him and as he placed his right foot he felt lying on the grass. He was not able to realize what had happened but later he found that he had been traveled to 50,000 years into the future from 1949 to the year 847 of the Galactic Era.

The cost in energy involved in this performance was terrific by Earthly calculations, but it had behind it the completely incredible resources of tens of millions of planets, continually growing in number. (it has been estimated that in the Year of the Galactic Era 827 an average of fifty new planets each day were achieving the dignity of provincial status, this condition requiring the attainment of a population of five hundred millions) (PS 35)

Schwartz has travelled 50,000 years into the future where he finds the Empire called Galactic Empire. Man has spread out and colonized the galaxy. He finds himself among the people where he cannot understand the language and culture. He has been taken by a farming family and later brought as a volunteer to test a new device "the synapsifier" (the brain enhancing machine).

In any case, the point I am trying to make is that the man claims to have

developed something he calls a synapsifier, which is supposed to improve the learning capacity of the mammalian nervous system. (PS 44)

Dr Shekt develops an unexpected telepathic talent with the help of the intelligence heightening machine. None of them is ready to test it but Schwartz has been taken by the farmer family as a volunteer for that experiment without his knowledge. He has been given mysterious other mental powers that allows him to read the minds of others and control them. After his treatment his mind has improved a lot. He learns the new language quickly and the features of the chess game he plays with Grew. Schwartz is able to realize his mental abilities are enhanced in a way to read minds, control the movements of others and even can kill a human being using his mind. Later he escapes from Dr Shekt's institute. When he is walking on the road, he feels hungry and steps inside a restaurant. As technology has been developed in the far future he doesn't know how to get food. Then he finds that it is a 'Foodmat' through which one can get food by inserting a coin.

Food right here, bud. Just pull up a chair at any table you want use the foodomat....Foodomat! Don't you know what a Foodomat is? Look at the poor jerk, Messter. He is looking at me as if he doesn't understand a word I say. Hey, fella-this thing see. Just put a coin in and let me eat, will you? (PS 95)

Schwartz does not know how to get food since he has not been used to it earlier and it has been a different experience. Asimov clearly depicts the future technology which will be entirely different from the present by which human tries to improvise their living. Most of his works are filled with all sorts of technological advancement. They seem to be strange at the first time but in today's world a few exist and a few may exist in the upcoming future. The post-world war II era brought a wide

range of new technological advancements in the field of automobile. He has used the advanced mode of transportation in his works. In *Pebble in the Sky* both Arvadan and Pola travelled in the air-taxi: "It had been a short and silent ten-minute air taxi ride to the city proper, and now they stood at the deserted blackness of the institute" (PS 113). He has also used another advanced mode of transport. "a small, elongated, biwheeled car". An air taxi is nothing but a small commercial aircraft or it may also be called as flying taxi service which makes transportation easier. Uber, a multinational transportation company has its plan in the future to launch by 2023 in India. Asimov had used this term long ago in the 1950's where it was not at all in existence.

Asimov has mainly focused on the theme of technological advancements in his works. But as an effect of it he has also concentrated on the theme of social issues such as overpopulation, global warming and other themes. In this novel, he depicts the theme of overpopulation through a custom called 'The Sixty': "The Sixty is your Sixtieth year. Earth supports twenty million people no more" (PS 138). Due to the advancement of technology of nuclear explosion, radioactivity has contained the soil and only minimum people can live in the earth. Earth is a moderately radioactive world and it is considered as an Empire unfit for human habitation: "Earth's crust is radioactive. The soil glows, always glowed, will glow forever. Nothing can grow. No one can live- you really didn't in it know that?" (PS 137).

When the earth becomes radioactive the soil will be there but nothing will grow on it. It becomes unsuitable for the people to live. The natives of the Earth are considered to be undesirable as the planet. The officer Lieutenant Claudy hates the earthmen and he says: "I don't like Earthies," he said. "I never liked them. They're the scum of the Galaxy. They're diseased, superstitious and lazy. They're degenerate and stupid. But, by the stars, most of them know their place" (PS 225).

Asimov makes clear that Earth is the original home planet for all humans, and that is no longer known to the other worlds of the empire. The reaction of them is that Earthies are just trying to find some reason to make their planet more respectable. As the situation grows worse, the leaders of the Earth have developed a plan to strike back at others galaxies. Since technology is too advanced in the future World High Minister and his secretary Balkis gather a group of people who develop a mutated virus called "radiation fever" which is capable of affecting all the other humans. Dr Shekt warns once the virus is delivered to the other worlds "millions will die each day, and nothing will stop it". Asimov has used another advanced technology of spreading the virus which is nothing but a biological war to destroy the human race.

James Gunn in his *Road to science fiction* observes the following:

Science fiction is the branch of literature that deals with the effect of changes on people in the real world as it can be projected into the past, the future, or to distant places. It often concerns itself with scientific or technological changes, and it usually involves matters whose importance is greater than the individual or the community; often civilization itself is in danger (Gunn, Road 6)

Asimov has given the solution to the problem in his own optimistic way. The solution is also given by the advancement of technology. Schwartz reveals that he is a time traveler and he joins with them and demolishes the plan of the Balkis by controlling his mind as a result of synopsisier. They use this synopsisier to develop a deadly strain of radiation fever. The entire Galaxy is saved by the role of Schwartz.

Asimov has depicted both the constructive and destructive sides of science and technology. If humanity depends on machines for everything it will result in humans deprived of their skills and power and they may lose their uniqueness. So human beings should be

conscious to protect their identity until they are in the hands of good users. At the same time, it is also necessary to think over the possible dangers of machines and technological advancements. Manuel De Landa, contemporary American writer and philosopher, states this in his book *War in the Age of Intelligent Machines* (1991) Likewise Da Lands says,

Humans are at a critical and significant juncture where humans have allowed robots, “smart missiles”, and autonomous bombs equipped with artificial perception to make decisions about killing is ...This represents an important and dangerous trend where humans are transferring more of our cognitive structures into our machines. (De Landa 79)

He concludes the novel by giving a chance for the earthmen to remake their own planet by removing the diseased soil and replacing it with a healthy soil. Through this novel Asimov has clearly depicted the impact of technology through which he has explored many new states of the technological advancements. As an optimist he has shown the omnipresent rule of human beings throughout the galaxy he has provided a caution about the post-atomic war horrors. At the same time, he has also highlighted a caution about the hollows such as ‘atomic and chemical bio chemical wars which world led to full of mankind.

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