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THE INVENTION AND CONSTRUCTION OF AIRSHIP IN JOSE SARAMAGO'S NOVEL *BALTASAR AND BLIMUNDA*: A STUDY

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Abstract:

It is generally said that Science is the mother of all invention and according to this ideology an invention is based on the scientific theory and research. Today science has been exploring new dimensions and views regarding the welfare of human being. The various devices are being used by people, human beings have reached up to the moon, any corner of the world can be accessed and explored and all these things have become possible because of the science and technology. This arena is providing a huge platform for an invention and research. The present novel it is based on historical and technical aspect in which Padre Bartholomeu Lourenco de Gusmao, Baltasar and Blimunda are the main characters who are tirelessly and passionately working on the project of flying machine which is the royal challenge by the Portugal king John V. the present novel is based on fact based concept that is the invention of world's first airship which is known as 'Passarola'. while constructing the flying machine Bartholomeu has faced several challenges but finally he has achieved his milestone. Present research article explores the concept of airship which was built in portugal by the scholar Brazilian 'Padre Bartholomeu Lourenco' and its petition was presented in 1709 to king John V of Portugal.

Keywords: *Passarola, Bartholomeu, Baltasar, Blimunda, Petition, Flying Machine etc.*

Introduction:

This novel is written in Portugallanguage as a 'Memorial do Convento' by well-known novelist Jose Saramago in 1982. Later on the novel is translated into English by name 'Baltasar and Blimuna' by British translator Giovanni Pontiero in 1987. This piece of literature is a wondrous and challenging to deal with. The setting of the book is 18th century Portugal. This work can be considered as historical novel because the characters are real and fact based. One section of novel it is related to invention and construction of flying machine and another which is related to construction of the Mafra palace. Baltasar is former soldier who has lost his left hand, while fighting for his country. Blimunda, a woman with mystical powers and x-ray vision, can look into others soul with the power she has. They both are treated as sun and moon

Padre Bartholomeu Lourenco is another important character in this popular work. He is a priest in the church. He is the scholar in academy and skillful courtier in the palace. He has a sharp vision and studies the Torah and Koran. People call him De Gusmao Padre Bartholomeu Lourenco because he

completed doctorate degree in canon law. A priest who attempts to develop a flying machine and later on Baltasar, Blimunda also participate in the construction and development of airship, which Bartholomeu baptizes it 'Passarola' (huge bird). The ship is a combination of engineering innovation and magical attributes. It is levitated with the help of globes, which are filled with human 'wills'.

The Petition for the Flying Device:

In the year April 1709, the supreme court of justice of king V of Portugal received a petition by Bartholomeu Lourenco in which he mentioned that he has discovered a device this device can fly through air as well as sea. It covers 200 leagues a day. If such time comes, this device can send message and warnings to army and remote area people. The Businessman can send their goods and letters at any time. People may be rescued from enemy attacks. The right use of this machine is restricted to only one person, to whom all orders should be sent, those that are suitable to such a mean of transportation, forbidding anyone else of using it under ruthless penalties. The petitioner should be rewarded for his invention. No person, in any event, may use it in this realm and it conquests, unless the petitioner or his rightful heirs have granted permission (Torre do Tombo, 202).

The Design of the Passarola:

This machine works on the principle of hot air balloon. Hot air balloon works because hot air rises. Air heats inside the balloon and due to this reason it becomes lighter than the cooler air outside of the balloon. Vivian has this idea about hot air balloon, he discussed with padre barthlomoeu before experiment. The priest began to explain the details, at first calmly and then in tones of great excitement, "what you see here are the sails, which cleave the wind and move as required, a rudder, which steers the machine, the main body of the machine, which assumes the shape of a seashell from prow to stern, with Bellows attached just in case the wind should drop, as frequently occurs at sea, and these are the wings, which are essential for balancing the machine in flight and from the wires forming the roof we shall suspend amber balls, because amber reacts favorably to the heat of the sun's rays, and this should achieve the desired effect, and here is the compass, without which we cannot travel anywhere, and here are the pulley's, used to raise and lower the sails, just as on ships at sea" (Saramago, BAB, 56 - 57). Design of this machine was first published in June 1709, in an article concerning *Passarola* issued on the Austrian journal *Wienerisches Diarium* (Visoni, 7-9).

It is an explanation of Passarola. These are different sections of flying machine, after assembling it properly machine will takeoff successfully. Individual role of every compartment is mentioned here as follows:

A: Represents the sails, where the air divides.

B: The stern to control the ship that she may not move at random.

C: The body of the ship, which is formed at both ends, scallop-wise, in the concavity of each is a pair of Bellows which must be blown when there is no wind.

D: Two wings which keep the ship straight.

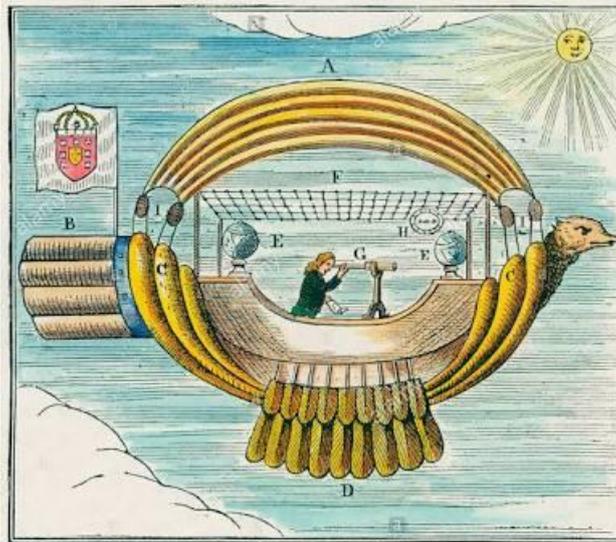
E: The globes of earth and heaven containing in them attractive virtues. They are of metal, and serve for a cover to two load stones placed in them, upon the pedestal, to draw the ship after them, the body of which is of thin iron plates, covered with straw mats for convenience of 10 or 11 men besides the artist.

F: A cover made of iron wire, in form of a net on which are fastened a good number of large amber beads, which be a secret of operation will help to keep the ship aloft; and by the suns heat, the aforesaid mats that line the ship, will be drawn towards the amber beads.

G: The artist, who by the help of the celestial globe, a sea map, and compass takes the height of the sun, thereby to find out the spot of land over which they are on the globe of the earth.

H: The compass for correct direction.

I: The pulleys and ropes that serve to boost the sail.



alamy stock photo

(“Passarola image”)

Why Bartholomeu Choose Bird Like Structure:

Birds and air planes have some similar structures which help to fly, takeoff and land. Birds are the only living creatures which have the natural skill of flying into the sky. Human being is imitable creature, he studied deeply flying techniques of birds. By using this technique he developed wings like flying structure that is air planes.

1. The takeoff:

Birds takeoff in different ways. Birds have their special technique of hover into the sky. Some birds run on the ground and then jump in the sky, some birds flap their wings and jump in the sky. When birds flap their wings that time they swipe the air below and when they run it creates pressure below the birds. So, this creates air lift which is useful to push them upward.

The same technique which is used now a days in aircraft. In helicopter, moving wings pushes the air downwards like wings of bird do. In airplane, it runs on the runway which creates the pressure which is responsible for creating the lift for flight.

2. The shape and structure:

The structure of birds and aircraft is resemble with each other. Both have well organized body structure which is essential for flight. The body of aircraft which is made up of light materials whereas birds have weightless small bones and light feathers in their body.

The wings structure make birds and airplanes far closer, both of them have very light and weightless shape of wings. Also, the front part of aircraft is pointed which is similar the front part of a bird.

3. Flight Techniques:

Birds and aircraft both have various flight techniques which resemble with each other. Both birds and aircraft can glide in the air for a longer distance and for longer time.

Also the helicopters can hover as different birds do. The diving technique in airshows which have been using by pilots is imitates from birds. Most of the flights techniques human beings have adopted from birds through deep study and research.

4. Movement in the air:

Aircraft use different and advanced parts in their wings and tails to change direction so as to direct the movement like rudder, elevator and ailerons. It controls tilting as well as horizontal and vertical movement. Likewise the tails of birds are responsible for the hover and the entire movement since both parts of birds is completely movable unlike aircraft.

5. Landing:

Aircraft and birds both gain or lose elevation with the variation of the drag force that acts downward and the lift force that acts upwards (“similarities between birds and aircraft”).

Working of the Passarola:

The ‘Passarola airship’ was constructed by Bartholomeu, Baltasar and Blimunda. Padre said that, ether is most important factor to run the flying machine. He leaves for Holland, that is learned

city, and there he studies the art of extracting ether from the atmosphere in order to filter it into the globes. Without ether machine never be able to fly. “What is this ether?” Asked Blimunda” (Saramago, BAB, 125). It is part of the general principal that attracts human being and even inanimate things to the sun once they released from the earthly weight (This is the theory which oppose the earth’s gravitational force). Amber balloons are at the top of the machine attached to the wires. It is important that, sun should attract the amber which later attracts the ether we’ll have filtered into the globes, then ether will attract the magnet below; later on magnet will attract the metal plates which attached to the body of the ship. If once metal plates are released from the body of ship only that time device can raise into the air assisted by the wind. As Padre said, without any ether, the other materials serve no purpose. Blimunda said, “if the sun attracts the amber, and the amber attracts the ether, and the ether attracts the magnets, and the magnet attracts the metal. The machine will be drawn toward the sun without being able to stop” (Saramago, BAB, 83).

Journey in the Passarola:

Bartholomeu and his team spent many years on the working of Passarola. Honestly and consistently they worked on this project. Many obstacles were come in their way but they did not lose their hopes. Nothing is impossible in this world according to this meaningful line they have did impossible work and their invention become world’s first airship in the history of aviation. Priest is too much confident about his innovative idea, but he needs financial support and an assistant who helps him in his work. Priest presents petition in the royal court of the king John V about an airship, John V likes his idea and he is ready to provide financial support then priest came in contact of Baltasar at the construction site of the Mafra palace when Baltasar hears the concept of airship he is impressed and ready to help priest in this way his needs are fulfilled and enthusiastically he starts to work. Many needful things he has imported from foreign countries and he himself lived there to get adequate knowledge about his work. After spending his lot of efforts and time his dream comes into reality. His flying machine is ready to hover in the sky the moment for which they all are eagerly waiting!

Bartholomeu, Scarletti, Baltasar and Blimunda are ready to fly. ‘They are on the flying machine and it is waiting for their order to soar into the sky. They are observing sky is cloudless and sun is bright and shining. Baltasar and Blimunda pull the rope to start it they allow sunshine on the amber balls. Passarola is flying freely. It raised his head like seagull. Baltasar and blimunda are on the wooden deck of machine. The village is barely visible. The passarola is flying so high in the sky. The Portugal king could not see them. The holy office of inquisition could not see and purse them. Finally priest’s dream comes into reality. He has successfully invented flying machine and it started to fly safely. The holy office of inquisition sees padre and his group is flying in the machine. They might have thought padre is the chosen son of god’ (Saramago, BAB, 183).

Padre flies in the sky on his own daring. He is confident about his work and efforts. Flying machine is soaring high into the sky. Padre wants to catch the glimpse of the land below from four directions. Baltasar and blimunda they are feeling proud. The priest comes and joins them. “He had suggested the priest himself was god, baltasar his son, and blimunda the holy ghost, now all of them are together, there is only one god, he shouted” (Saramago, BAB-184).

Conclusion:

‘The Passarola’ is a great invention by Brazilian priest, scholar academician Padre Bartholomeu Lourenco. The passarola it had a very successful step towards the Portuguese aviation sector. Unfortunately public test of this machine could not take place. When the news of flying machine spread throughout the Portugal people started to discuss that if an inanimate object flies over our country it is not a good omen for Portugal people. Meanwhile construction of the Mafra palace has begin and that time actual journey of Passarola has taken place, when an airship was flying over the Mafra palace at this moment same people who has refused the concept of an airship superstitiously they started to talk that God is showering his blessings towards the palace. It means people are ready to accept the existence of God but they are not ready to accept the work of human being. Priest is very unfortunate that he did not get fame and popularity when he was alive. This novel has a wide scope for further research in the domain of history, science and technology.

References

- “Passarolaimage” www.alamy.com/stock-photo-passarola-bartolomeu-de-gusmaos-airship-1709-13_5096906.html. Accessed 30 May 2021. (Web)
- “Similarities between birds and aircraft” www.unfoldanswers.com/5-similarities-between-birds-and-aircraft0s. Accessed 30 May 2021. (Web)
- In Torre do Tombo, chancelaria de D. Joao V: officious e Merces, Book 31, sheet 202, copied from Divaldo Gasper de Freitas. (Print)
- *Journal des Scavans*, October 1784, pp. 673-674.
- Saramago, Jose. *Baltasar and Blimunda*, (Trans.) Harco Brace, Michigan, 1987.
- Saramago, Jose. *Baltasar and Blimunda*, (Trans.) the Harvill Press, London, 2003.
- Visioni R. M., Candle. J.G., “Bartolomeu Lourenco de Gusmao: o primerio cientista brasileiro” *Revista Brasileira de Ensino de Fisica*, pp.7-9. 2009.



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