POE'S "THE ADVENTURE OF HANS PFALL": A SCIENTIFIC FICTION

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Abstract: The study of the period from 1830 to 1850, leads the readers to conclude that Poe's scientific stories were deeply influenced by the scientific developments of the period. In the United States, this period was, an era of invention and innovation in all branches of science. Poe's fascination with science can be traced throughout his life. In many of his tales he deals with exact or practical applied sciences. Poe often extracted strange ideas from scientific phenomena to make up fantastic tales. His attraction towards practical scientific inventions led Poe to write his balloon-voyage tales: "The Unparalleled Adventure of One Hans Pfaal", "The Balloon Hoax" and "Mellonta Tauta".

"The Adventure of Hans Pfaal" is a tale about a balloon journey to the moon. Poe shows a keen observation of astronomical matters in this tale. The balloon was not made of silk, as it was the fashion of the time; it was of cambric muslin which was less expensive.

At the end of "Hans Pfaal" it is remarkable that Poe himself calls his tale a hoax.

Key words: Poe's Fascination with Science, scientific phenomena, astronomical, hoax.

Introduction: Before the breaking of colonial ties with England, Americans were used to going abroad to get an education or sending reports, for direction or publication, to scientific societies in London. Americans took advantage of the access they were allowed to English libraries, museums, and publication opportunities. In fact, they even seemed to share the pride of Britain's scientific eminence since they were both part of the same Empire.

After Independence, however, great changes took place in the mentality of American people. The once imperial pride gave place to national shame; that is, American scholars felt they were already capable of providing for themselves what had one day been provided by other countries. They wanted to extend their political independence to economic and scientific independence. The faith and optimism of the independent Americans towards the growth of science can be well illustrated by the words of Daniels:

"It would promote the economic interests of the people generally — the small businessman and the mechanic as well as the rich merchant and the large farmer - and it would bring relief to the sick and the destitute. A new and far better world was not only possible but just around the corner in America." (Daniels, 164).

American Congress would approve only mercantile expeditions. It had no power to give funds to purely literary or scientific research. Sciences which required laboratory work were not given support. Expeditions were supposed to serve military, commercial, industrial, agricultural and mining interests. During the middle of the nineteenth century, government support would be given for scientific projects only when immediate utilitarian gain followed.

The situation had changed completely. The earlier hostility towards science had only been overcome during the second quarter of the nineteenth century, after the growth of urbanization and industrialization, and the spread of public education. Americans had now become more preoccupied with the diffusion than with the advancement of sciences.

During the first half of the nineteenth century most American scientists were deeply religious men who insisted on reconciling their work with their religious beliefs. Conservative scientists attacked the chemical doctrines of life which deprived man of the soul and made him a complex chemical machine. For them no scientific law could explain the beginning of life. Most people thought that such a cause was already known for;

"The earth was made for man, there had been purpose in its creation, and every topographic feature testified the omnipotence of the Creator" (Daniels, 159).

At the end of the first half of the century, scientists began to deal with controversial subjects such as Evolution, Thermodynamics, Mesmerism and Phrenology.

The first half of the nineteenth century witnessed great achievements in scientific discoveries and of great adventures. According to Daniels, American science during this period was theoretical, specialized, professionalized and concerned with physical sciences. These changes affected the American society, and certainly affected Poe. Poe was unusual since he was neither specialized nor professionalized. He was both theoretical and concerned with physical sciences. Poe used science as it suited him to produce ideas for his stories. It was among the ambiguities of this transitional intellectual era that Edgar Allan Poe lived his short life.

This attraction towards practical scientific inventions led Poe to write his balloon-voyage tales: "The Unparalleled Adventure of One Hans Pfaal", "The Balloon Hoax" and "Mellonta Tauta". These tales are not only important because of the use of balloons but also for the discussion of themes related to exact sciences

as physics, chemistry, geography, astronomy, and other sciences.

"The Adventure of Hans Pfaal": "The Adventure of Hans Pfaal" is a tale about a balloon journey to the moon. Poe shows a keen observation of astronomical matters in this tale. The balloon was not made of silk, as it was the fashion of the time; it was of cambric muslin which was less expensive. It received three coats of varnish of caoutchouc rubber and was attached to a large and deep basket of wicker work. The inflation was effected by the use of a new gas, a constituent of azotes, because its density was much less than that of hydrogen. The reader may notices that Poe also appeared to be informed of the way to equip his hero for such a trip:

"...a telescope; a barometer, with some important modifications; a thermometer; an electrometer; a compass; a magnetic needle; a seconds watch; a bell; a speaking trumpet, etc., etc., etc.; also a globe of glass, exhausted of air, and carefully closed with a stopper, - not forgetting the condensing apparatus, some unslacked lime, a stick of sealing wax, a copious supply of water, and a large quantity of provisions, such as pemmican, in which much nutriment is contained in comparatively little bulk, I also secured in the car a pair of pigeons and a cat." (Poe, 10)

Hans Pfaal taking animals along with him is an indication that Poe had possibly read or heard of laboratory techniques. He also knew how blood pressure works in such high altitudes:

"...besides pain attending respiration, great uneasiness is experienced about the head and body, often accompanied with bleeding at the nose, and other symptoms of an alarming kind, and growing more and more inconvenient in proportion to the altitude attained." (Poe, 17)

According to John Esten Cooke's single-entity theory of disease the cause of all human ailments was an accumulation of blood in the veins of the liver and other abdominal viscera and bleeding was the treatment which would relieve any pain. Poe used the same theory to have Hans Pfaal relieve his pains; by opening the veins of his arms with the help of a penknife. In "A Tale of the Ragged Mountains" Bedloe suffered from a cold and fever. To get relief from the pains provoked by a great concentration of blood in the head, leeches were applied to Bedloe's temples.

As he was approaching the moon, Hans Pfaal awoke one morning and thought the balloon had burst or turned upside down. He felt the sensation of falling back to the earth. The situation had been inverted: the earth was above him and the moon beneath him. This notion is correct, for astronomy has proved that there is a time when the gravitation towards the moon becomes more powerful than that towards the earth. This is the reason why Hans Pfaal thought he was falling. In fact, the feeling is that of descent, but towards the moon itself. In certain respects, Poe's description of the physical appearance of the moon is similar to that which was really ascertained by the first aeronauts who first stepped out on our satellite:

"...the indentures of its surface were defined to my vision with a most striking and altogether, unaccountable distinctness. The entire absence of ocean or sea, and indeed of any lake or river, or body of water whatsoever, struck me, at first glance, as the most extraordinary feature in its geological condition." (Poe, 34)

At the end of "Hans Pfaal" it is remarkable that Poe himself calls his tale a hoax. It could be taken as a clue that Poe himself was not confident enough of his scientific knowledge to present it as true. It should be noted that the departure of the balloon was on the first of April. Also in the note he defends himself from the charge of having copied his story from Mr. Locke's "Moon Story"; though he agrees that both stories have the character of hoaxes and "both attempt to give plausibility by scientific detail."(Poe,38). Thus, Poe himself admits that his science was partly borrowed and applied purposefully. He tried to give verisimilitude to his stories by the application of scientific principles. Continuing his comments on Locke's "Moon Story" Poe states:

"That the public were misled, even for an instant, merely proves the gross ignorance which is so generally prevalent upon subjects of an astronomical nature." (Poe, 39)

Conclusion: Poe believed himself to be able to unfold the secret of all things. Poe was trying to identify himself with the first spiritual unity or God. He felt that he could not accomplish anything else. Perhaps Poe realized that he had gone too far, and found out that there are mysteries which can never be thoroughly revealed. Only death made him stop his lifelong search for spiritual integrity. But his soul may still be soaring, looking for the answers he was not able to find during his earthly existence, for as he himself said, "The will may assent-the soul - the intellect, never." (Poe, 89)

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