



SCIENCE, RELIGION AND HISTORY IN DAN BROWN'S ANGELS AND DEMONS

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A novel acts as a source of entertainment for the people who are interested in reading. Some are interested in scientific fiction. Some have pleasure in reading novels containing historical facts and twists. Some people love to read thriller fictions. The reader's interest differs according to their needs. Thus novelists use various techniques to satisfy the needs of the readers in an all round manner. Every novelist is unique in their style and writings. They combine all the important components present in their everyday life along with the use of famous incidents and create an interesting fiction.

Dan Brown is one of the important American novelists who use his wide knowledge of science, architecture, history and religion for creating his own fiction. His excellence is seen widely in his work *Da Vinci Code* (2003) where he combines the history of Jesus with the contemporary situation. He mingles facts along with fiction and creates an interesting plot. The readers are carried away by his fictional characters and it is evidently seen by the success of his works. His novel *Angels and Demons* (2000) also show his excellence in his use of historical facts with scientific techniques with the combination of religion. The paper aims to show how the novelist uses these three different fields in an effective manner to reach his creative fiction. The paper also aims to show the real facts behind his fiction.

The novel begins with the murder of the physicists in CERN, Leonardo Vetra. His chest is branded with the ambigram of "illuminati", the secret society which works against the rule of Catholic churches. Maximilian Kohler, the director of CERN calls Robert Langdon, the Harvard symbologist to examine the ambigram. After the arrival of Vetra's adopted daughter it is found that the newly discovered antimatter comparable to the power of nuclear weapon was stolen by the "Illuminati." The antimatter should be placed in an electrical charger which ensures its stability but when removed the backup battery activate automatically and works for twenty four hours. After that the antimatter results in "Annihilation", that is self destruction equal to the explosion of a nuclear power. At the same time the Pope died and the four Perferiti cardinals who were likely papal successor found missing. Robert Langdon and Vittoria tries to stop the "Illuminati" from destroying the Vatican City with the antimatter. Their search is assisted by Camerlengo Carto Ventresca (the late Pope's closest one) and the Vatican Swiss guards.

Robert Langdon attempts to retrace the "Path of Illumination", a process by which the secret society attracts the aspirants at the early ages of scientific discoveries which remains the clues on the various landmark of the "Illuminati" even today in and around Rome. Robert Langdon is moving in the path of illumination with the hopes of finding the antimatter as well as the missing cardinals. The Paths are associated with the primordial elements "Earth", "Air", "Fire" and "Water". Robert Langdon finds the four cardinals murdered cruelly in the four sets of these primordial elements. The first cardinal was branded with Earth and murdered by cutting his throat buried in earth. The second cardinal was branded with an Air ambigram and was murdered by puncturing his lungs. The third cardinal was branded with Fire and burned alive and the fourth cardinal branded with Water was wrapped in chains and left drown at the bottom of a fountain.

On the murder of the third cardinal Robert Langdon finds that the murderer kills the cardinals under the instruction of the leader "Janus". The murderer along with the third cardinal kills Commander Olivetti and kidnaps Vittoria. Later Robert Langdon fails in rescuing the fourth cardinal but his search leads him to Castel Sant'Angelo which hides a tunnel leading directly to the Popes Chamber. After rescuing Vittoria Vetri on the death of the killer reaches, Robert Langdon and Vittoria hurry back to St. Peter's Basilica. They find Kohler is in private meeting with Camerlengo and suspected Kohler as "Janus". On the scream of Camerlengo branded with the Illuminati's Diamond on his chest, Kohler was shot to death. The video tape given by Kohler to Robert Langdon reveals later that the Camerlengo was the "Janus" and he murdered Pope for his interest in combining Science and Religion together. He thought that the Pope moves against the vow of chastity and in order to rectify the sin he murdered the Pope. He placed the antimatter near St. Peter in order seen as a saviour of Christendom. Camerlengo uses the idea of "Illuminati" in order to cover his own plans. After realizing the truth that he is the son of Pope by artificial insemination he soaks him in oil and immolates himself in front of the crowd.

Today modern scientific advancements help the human individuals in many ways. With the help of scientific technologies man can create as well destroy Mother Earth. The nuclear energy and other scientific advancements in the field of biotechnology help us in different manner for the welfare of human beings. At the same time, during the middle ages there is a constant tension between science and religion. It is seen clearly on the historical incidents like the crucifixion of Galileo Galilee and his members. Dan Brown uses these historical incident and modern scientific advancements to form his plot.



The first scientific idea Dan Brown argues is the formation of antimatter. On reading the novel, the character Vittoria Vetra introduces some information's regarding antimatter. "My father produced the first particles of antimatter but was stymied by how to store them. I suggested these. Airtight nanocomposite shells with opposing electromagnets at each end" (*Angels & Demons* hereafter referred as AD 99). On the reading the novel the reader has the following questions in their mind such as Does the antimatter really exist? Is it has such a level of energy? Is it formed by CERN? Or is there any research on this particle? What is Annihilation? According to Dan Brown, the antimatter is, "A fact of nature. Everything has an opposite. Protons have electrons. Up-quarks have down quarks. There is a cosmic symmetry at the subatomic level. Antimatter is *yin* to matter's *yang*. It balances the physical equation" (AD 96).

According to the Big Bang theory, there are matters and antimatters. Matters went on for the formation of universe while the antimatter disappeared because of the process of annihilation. When the matter and antimatter come in direct contact with each other, they destroy each other. This process is called as "annihilation". "Antimatter was created at CERN in 1995, when nine atoms were created over a period of three weeks" (*Mirror.co.uk, Web*). In reality, Researchers created only a small quantity of antimatter which is less than 10 nanogram and it can produce energy of making power for 60 W bulb lighted for four hours. The official website of CERN states that there is no possibility of making a gram of antimatter. It needs high energy for its production.

The efficiency of antimatter production and storage is very low. About 1 billion times more energy is required to make antimatter than is finally contained in its mass. Using $E=mc^2$, we find that 1 gram of antimatter contains: $0.001\text{kg} \times (300,000,000 \text{ m/s})^2 = 90,000 \text{ GJ} = \text{million kWh}$. Taking into account the low production efficiency, it would need 25 million billion kWh to make one single gram! Even at a discount price for electric power, this would cost more than a million billion. (CERN, Web)

Dan Brown imagination of creating an antimatter of 1 gram is not possible because of its physical nature. If it is produced, this pure state of energy can be used in a destructive way. The possibility of making one gram of antimatter as Vetra formed in the novel is a question mark. "To make 1g of antimatter - the amount made by Vetra in the movie (adopted from the novel *Angels & Demons*) - would therefore take about 1 billion years" (CERN, Web).

Dan Brown uses latest scientific miracle as a weapon to explore his imagination of the world catholic leader the Pope having child of his own. Though the character Pope presented in the story is fictional, the status and the position they characters held is true. He create the tension between the religion and science with the characters of Pope and the nun. In order to raise the tension in his thriller, he touches the religious sentiments of the christianity. The Pope, devoting his life to the service of god, having a child of his own is unimaginable for the ordinary people. Dan Brown explores his imagination to the highest level and created such a plot in his novel. The tension is revealed in his writing:

The Pope fathered a child.

Langdon felt the shock wave hit him too. Vittoria's hand, tight in his, jolted, while Langdon's mind, already numb with unanswered questions, wrestled to find a center of gravity. (AD 592)

Dan Brown justifies his imagination by saying that the Pope in his priesthood fallen in love the nun. Not to move away from the vow of celibacy and their devotion to God, they decided to use science as a substitute for their desire of attaining the joy of parenthood. They planned to have artificial insemination. Dan Brown combined the science and religion using his unique narrative style,

She had just read an article about a new miracle of science- a process by which two people, without ever having sexual relations, could have a child. She sensed his sign from God. The priest could see the happiness in her eyes and agreed. A year later she had a child through the miracle of artificial insemination. (AD 594)

The combination of science and religion is also seen in Vetra's relationship with Vittoria Vetra. Being a religious father, he adopted a daughter and had a affectionate love with her. "Leonardo protected her like a daughter" (AD 80). His view on Physics is also related to religion, "The laws of physics are the canvas God laid down on which to paint his masterpiece" (AD 81). Dan Brown putforth his point that both science and Genesis accepted the presence of an enormous source of energy. In Genesis it is none other than God, in the field of science the pure state of energy. "Science and religion support the same truth – pure energy is the father of creation" (AD 93). Here the two characters Leonardo Vetra and the Pope are religious in nature but both had a strong desire towards the field of science. The first wants "to bring science to the higher level ... where science supported the concept of God" (AD 92) and the feels greatly indebted to science for having his child through insemination, "He felt he owed a debt to science. Science let him experience the joys of fatherhood without breaking his vow of celibacy. (AD 595). The constant tension between the orthodox christian belief and the development is science is seen



clearly through the murder of both religious personality. In other words, “the enemy of the Church is not an angry secret society, but the most official and orthodox of all people” (Edgar, Web).

The Camerlengo Carto Ventresca acts as a best example for the above mentioned statement. His strong protest for the advancement of science is clearly seen in his statements to the world when the four cardinals have murdered by the so called group “illuminati”, “God has become obsolete. Science has won” (AD 419), “Does science hold anything sacred? Science looks for answers by probing our unborn fetuses. Science even presumes to rearrange our own DNA. It shatters God’s world into smaller and smaller pieces in quest of meaning . . . and all it find is more question” (AD 420). His strong belief of religion made him to move against the growth of science. He questions the growth of science and his inner conflict as a orthodox religious person is seen clearly through his words. The constant tension between the religion and science is clearly portrayed by Dan Brown through the character of Camerlengo as follows:

‘Who is this God science? Who is the God who offers his people power but no moral framework to tell how to use that power? What kind of God gives a child *fire* but does not warn the child of its dangers? The language of science comes with no signposts about good and bad. (AD 422).

By portraying the character of Camerlengo in an orthodox believer of religion Dan Brown satirises the nature of some rigid religious personalities who tries to reject the scientific advance as a mere way of destruction to mankind. Camerlengo blind belief on religion moves him to the level of murdering many people an indirect destruction. He justifies his murder of Leonardo Vetra by stating that, “the day science substantiates God in a lab is the day people stop needing faith” (AD 585).

The concept of illuminati is differently handled by Dan Brown in his novel *Angel & Demons*. According to the historical facts the “illuminati” is the group literally means illuminated one. The real illuminati group was founded in 1776, by Adam Weishaupt, the professor of canon law. It was a brotherhood made up of free thinkers, politicians and intellectuals. Its aim was to overthrow the restrictions of Roman Catholic Church and the kingdom of Bravaria. In 1784, Karl Theodore, Ruler of Bravaria, banned all secret societies which treat his kingdom. Dan Brown taken the idea of illuminati and combined the idea in a clever manner with the restriction of Catholic church in the Medieval Period. Dan Brown traces the origin of illuminati over the period of 1500’s. According to his novel, the church persecuted these enlighten ones and the superstitious beliefs of church may lead mankind to ignorant dark future. Thus the scientist has paid way to the path of illumination, which leads to the church of illumination. Dan Brown blends his fictional idea with the real historical places like Berrnini’s Habbakuk and the Angel and Agostino’s Chigi pyramidal wall tomb, West Ponente at St. Peter’s Square, ecstasy of St.Teresa and the Fountain of Four Rivers as a landmark for the path of illumination. Dan Brown also uses the historical personalities like Milton and Galileo for making his fiction more interesting. The incidents narrated in the novel makes the reader to forget the past history and their mind moves along with the fictional imagination of Dan Brown to think it as a real one.

The other important aspect seen in the novel is the use of Ambigrams. Ambigrams looks like the same and it was legible on both ways. Dan Brown claims that the ambigrams are the ancient art form known to the renaissance scientists and the illuminatous logo were created by illuminiti out of respect for Galileo’s fondness of symmetry. “The symbol itself was created by an anonymous sixteenth-century Illuminati artist as a tribute to Galileo’s love of symmetry – a kind of sacred illuminati logo” (AD 56). In Reality, Ambigrams are invented more recently in 1970’s by “John Langdon, who is professor of typography and identity at Drexel University in Philadelphia” (*Mirror.co.uk, Web*).

Dan Brown is excelled in his knowledge of art, science and history. His extensive study on art and artitecture helps him in creating his fiction in a thrilling adventourous manner. His style is simple and fusing the historical events and sites along with his fictional imagination provides him a unique place in the heart of the readers who loves thriller fictions. His intelligence of using the fact in a critical manner attains the reader’s interest. The incidents are held together and raises the pulse of the reader while reading the story. His unique style and his farfetched imagination helps him to gain a huge response from the readers. Though his writings was opposed by the people who has deep and strong faith in religion, his writings can be valued as a best intellectual piece as a fiction.

Works Cited

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