Mary Shelley's Frankenstein as an Apocalyptic Novel

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Abstract—The literary works that reflect on the apocalypse are called as 'apocalyptic literature'. Mary Shelley's novel *Frankenstein* can be considered as an apocalyptic fiction by highlighting the features of apocalyptic fictions present in the novel. The novel exhibits the stages of apocalypse.

Index Terms—Apocalypse, Armageddon, Mary Shelley, Frankenstein.

The earth is the only planet that has life in it. The universe is about more than four billion years old. Ever since human beings have originated on earth, the earth has been put to optimal use. The earth has faced a lot of wounds in the forms of mining, pollution, and depletion of the natural resources. The destructions wrought by the wars that are fought for money, selfishness or any kind of human motive has made Earth lose is its charm. Many environmentalists and writers have analysed the various harms done by humans to nature and also the gruesome consequences that all the living beings on earth undergo in the present era. They have also predicted that if man continues with harming earth, the world would become an unfit place for living things. Many theorists, environmentalists and writers say that the destruction would not take place on a particular day but gradually. Aligned to this, T.S. Eliot in his poem "The Hollow men" says, "This is the way the world ends / Not with a bang, but a whimper" [1].

The expounding theories about the end or destruction of the world is an ancient one and the earliest work that has talked about this kind of situation is *The Revelation* by St. John, in *The Holy Bible*. It is said in the *Genesis, The Holy Bible* that God created the world and made human beings to enjoy the wealth of nature in the Garden of Eden, the symbol of heaven, "And the Lord God took the man, and put him in the Garden of Eden to dress it and keep it" [2]. Added to it, *The Holy Bible* documents the fall of the first man as well as the continued violations done against God in the name of pride, greed, war and many other evil

ways. Further, it states that all these actions against God have incurred His wrath and He destroyed the first created world in which only Noah, his family and the some of the animals and birds were saved. Joseph B. Lumpkin says, "As sin spread throughout the world and the minds of men were turned towards evil, God saw no alternative but to cleanse the earth with a flood and establish a 'new nature' in man that does not have to sin." [3]. So, the current world is the second world given to people by God.

The people of the second world are warned about the consequences of the earth of God. Despite the continued warnings, even in the second world people indulged in various activities against God and his ways. So, God sent His son, Jesus Christ to redeem people from their sins. The life, death and the resurrection of Jesus Christ marks the change in the epoch and course of history. It is believed that through the blood of Jesus Christ all the sins of the people are cleansed. After Resurrection, Jesus ascended to Heaven and it is believed that when the troubles and sins grow, Jesus Christ will come again. It also proclaims that on the Dooms Day, the Second Coming of Jesus Christ will occur in a glorious way. This Dooms Day is otherwise known as "apocalypse".

Apocalypse is dealt in detail in St. John's *Revelation* This book expresses the terrific visions that announce and denote the end of the world. It is believed that after the crises, Jesus Christ will restore all the things by securing earth from the hands of the evil. Grant R. Jeffrey in his book *Apocalypse: The Coming Judgement of the Nations* opines that the words 'apocalypse' and 'revelation' are often confused:

The two words 'Revelation' and 'Apocalypse' are identical in meaning. They are both derived from the Greek word 'apokalupsis' which suggests the unveiling of something that has previously been hidden, a revelation, an appearing, the manifestation

of something. The apocalypse is therefore the Revelation of Jesus Christ". [4]

Jeffrey states that awareness of God's redemptive measures forms the essence of the revelation of the apocalypse. He also adds that after the apocalypse God will renew the earth with all its goodness once again.

St. John in his *Revelation* lists his visions about apocalypse and Second Coming. Critics state that people are apprehensive about *Revelation*, as they are not able to rightly interpret the visions. They envisage that if the people comprehend *Revelation* properly, the lurking dangers can be avoided. Martin Luther, a German priest and theologian says about *Revelation* as, "We can profit by this book and make good use of it... We can rest assured that neither force nor lies, neither wisdom nor holiness, neither tribulation nor suffering shall suppress Christendom, but it will gain the victory and conquer at last" [5]. The book of *Revelation* becomes a promising work to expose God's love.

Apocalypse is not pointed out only in Christianity but by other prominent religions on earth like Islam, Hinduism, Buddhism and Jainism that speak about the variants of apocalypse. Inspired by the apocalypse and the observation of the destructive events that take place in the world, various writers have reflected and created a verbal picture of the forms of the destructive events. The literary works that reflect on the apocalypse are called as 'apocalyptic literature'. St. John's *Revelation* is considered as the first book of apocalyptic literature. It is also a touchstone for the other apocalyptic works.

Apocalypse has been thus discussed from the ancient days, but as a formal literary genre it gained its popularity only during the twentieth century. Prior to the twentieth century genre of apocalyptic literature, various writers have written on the same theme but were not considered as apocalyptic. The list of such works include the old English epic *Gilgamesh*, Lord Byron's "Darkness" and "The Last Man"by Thomas Campbell, Thomas Hood, and Thomas Lovell in the same title. One such work is *Frankenstein* by Mary Wollstonecraft Shelley written in 1818.

Mary Shelley was born and raised in a family of renowned literary writers. William Godwin, her father, was a political philosopher and novelist and her mother Mary Wollstonecraft was also a

philosopher, feminist activist and theorist. Mary Shelley married the romantic poet and philosopher Percy Bysshe Shelley. Having lived among the family of celebrated literary writers, Mary Shelley also developed her passion for writing. Initially, Mary Shelley entered into the literary arena by publishing her husband's works posthumously. She sculpted herself as a writer through her first and highly acclaimed work Frankenstein in 1818. She is not only an apocalyptic writer but also a historical novelist, biographer and traveloguer. Her other works include Valperga in 1823 and Perkin Warbeck in 1830. She has published two apocalyptic novels including Frankenstein and The Last Man. Lodore and Falkner are her other two novels published in 1823 and 1837 respectively.

Frankenstein begins with Walton, the captain of a ship heading to the North Pole. He records his experiences at the sea by writing them as letters to his sister in England. During his voyage, he comes across a man, badly hurt, lying on a sledge. Walton rescues the man and enquires about him. The man introduces himself as Dr. Victor Frankenstein, a doctor and a scientist. He continues saying that being grief stricken by his mother's death and his overambitious nature, he secretly planned to resuscitate a new living being from the corpses. Pressed by his strong desire, he collected various parts of the body from different corpses and assembled them into a human form.

Dr. Victor realises his mistake of creating a monster, only after he gives life to it. Fearing the repercussions of his creation, Dr. Victor absconds himself. The monster finds Dr. Victor and compels to make him create a female companion for it. When Dr. Victor partially completed the female companion, he thinks upon the looming threat the monsters would pose and stops the work. The monster gets angry towards Dr. Victor and kills all his dear and near ones. After losing all of his family members, Dr. Victor tries to escape from the monster by sea. When Dr. Victor finishes his story, Walton and the other sailors promise to protect him from the monster. Nevertheless, the monster kills Dr. Victor, spotting him all alone. Walton is shocked to find the monster in the ship and the monster pours out its emotions, justifying his act of killing. Finally, the monster retires into darkness not to be seen again.

Frankenstein is also called as the Modern Prometheus. The alternative title refers to the Greek God of fire Prometheus. Greek mythology portrays Prometheus as a God who acted like the supreme God Zeus and later punished brutally for his acts. In the same way, the modern Prometheus referred by Mary Shelley is Dr. Victor Frankenstein. In an attempt to imitate God, he tries to give life and immortality to his creature. His plan backfires as his own creation kills him. Frankenstein is widely known as a science fiction. It can also be regarded as an epistolary novel as the whole text comprises of the letters written by Walton, to his sister. Written in an engaging manner, the novel attracts many readers and critics to view it as a 'ghost story' and it also falls under the category of Gothic or Horror fiction. This research paper aims to identify Mary Shelley's novel as an apocalyptic fiction by Frankenstein highlighting the features of apocalyptic fictions present in the novel. It also brings to the fore the stages of apocalypse with special reference to Mary Shelley's Frankenstein.

In *The Book of Revelation: Apocalypse and Empire*, Leonard L Thompson states that, "...a work may be called an apocalypse, if it resembles the Revelation of John" [6]. Modelled closely on prophet John's *Revelation*, Mary Shelley has created the novel in the same pattern starting from the structure to the content of the book. John's book falls under the three categories as epistolary, apocalyptic and prophetic. Similarly, like John's *Revelation* which consists of seven letters sent to seven churches, *Frankenstein* also talks about the story of Victor Frankenstein in a series of four letters written by the captain of the ship to his sister.

John's *Revelation* speaks about the destruction of earth by the evil. In the same way, *Frankenstein* talks about the destruction of Victor Frankenstein's entire family by the beast. The book of *Revelation* prophesies the future of the world and warns the people to abstain themselves from evils and turn towards God. Likewise, Mary Shelley foretells the dangers that would befall of human beings because of their vile ideas. She also warns not to disturb the creation of God and underscores that God is the only creator who does his work perfectly.

John in his book envisions the different creatures that will appear during the time of revelation. These creatures include dragons, beast from the sea, beast from the land or earth and winged animals like lion and horse. The novel *Frankenstein* in this aspect can be considered as an apocalyptic fiction as it overtly deals with the beast from the earth. The beast in the novel neither exists on its own nor comes from the underworld. It is created by a human on earth. These identical elements of *Frankenstein* and *Revelation*, marks Shelley's work as an apocalyptic fiction similar to St. John's work.

Philip Vielhauer, a renowned theorist in his bookproposes the fixed elements of the apocalyptic genre of fiction. He states that most of the apocalyptic writers, write anonymously or with a pseudonym which mostly resounds the names of great prophets like Ezra, Enoch or Isaiah. He expresses that "the writing is presented as an account of vision or dream, an ecstatic state or a heavenly rapture" [7]. Regarding the writing style, the apocalyptic writings present a portion of past history in the future tense to give a prolonged effect and expectation. He adds that in apocalyptic literature generally, farewell discourse, exhortations, prayers and hymns find a significant place, placed probably at the end of the work.

The elements of apocalyptic fiction pointed out by Vielhauer can be found in Mary Shelley's *Frankenstein*. As the first characteristic goes, when Mary Shelley wanted to publish her first own original novel, she published the first edition of her work as an anonymous writer. Shelley chose to be anonymous as women were not allowed to read or write during that period. It is only through her dedicatory note to William Godwin and Percy Bysshe Shelley that Mary Shelley can be identified as the author of the novel.

Apocalyptic fiction is said to be written or presented as a dream or ecstatic state. In the case of *Frankenstein*, it is a product of writing under an ecstatic state. The novel carries letters written by Walton who is frenzied by witnessing Dr. Victor and the beast. After the beast killed Dr. Victor, Walton goes to an ecstatic state and immediately writes to his sister about the Apocalypse. Shelley herself in the introductory chapter of her first edition of *Frankenstein*, calls her work as 'a waking dream'. In Mary Shelley's Introduction to the 1831 edition of *Frankenstein*, she recounts that when she was in a dreamy state, she got the principle idea of the novel that corpse would be reanimated. She writes,

I saw the pale student of unhallowed arts kneeling beside the thing he had put together. Frightful must it be; for supremely frightful would be the effect of any human endeavour to mock the stupendous mechanism of the creator of the world. [8]

The works about apocalypse present the past events in a futuristic manner. This characteristic feature can be found in the letters written by Walton. Walton describes the past events that happened in the life of Victor Frankenstein, but he writes to his sister as though it would happen in the future. He says that "...so strange an incident has happened to us that I cannot forebear recording it, although that is very probable that you will see me before these papers can come into your possession." [9].

Farewell messages form the fourth characteristic of apocalyptic fiction. After lamenting over its brutal acts and killing of Dr. Victor, the beast thinks of killing itself. It then retorts and bids farewell to Walton. "I shall ascend my funeral pile triumphantly and exult in the agony of the torturing flames. The light of that conflagration will fade away; my ashes will be swept in the sea by the winds. My spirit will sleep in peace, if it will not surely think this farewell." [10]. Shelley's *Frankenstein* abounds with the features of apocalyptic literature and fits into the genre.

Apocalyptic literature not only possess the above characteristics but also comprises of the different stages of apocalypse. St. John in his Revelation, talks about the stage of 'armageddon' that would happen before the apocalypse. It is picturised in the Holy Bible as "They are spirits of demons performing miraculous signs and they go out to the kings of the whole world, to gather them for the battle on the great day of God Almighty...Then they gathered the kings together to the place that in Hebrew is called Armageddon."[11]. Armageddon is derived from the Greek word 'Harmagedon' and the Hebrew word 'Har Megiddo' which means the place where the armies of the good and evil would battle at the end of the world. In the later centuries, the term is used to denote an event that is likely to destroy the world or the human beings entirely.

The term also particularly means the twenty- first century BCE war that took place between the Kings of the East and the Kings of the West, because of a nuclear calamity. The war was then named as War of the Sons of Light against the Sons of Darkness. This war has thus been referred in history to be the first battle of good and evil and thereafter the first world created by God was demolished and a new world was born. In the second world, the Armageddon is a symbol of destruction wherein the world experienced the two World Wars, of which, the Second World War is considered the most destructive and also the place of War in Germany was named as Armageddon. From the nineteenth century onwards, armageddon is used a symbol for any great destruction that pave way for the apocalypse.

Zecharia Sitchin in his book, *The End of Days:* Armageddon and Prophecies of the Return tells that in the recent times the Middle East and some other countries in other parts of the world are in the constant fear of armageddon and its consequences. He further says, "The sad fact is that a mounting conflict among gods, not men-did lead to the use of nuclear weapons, right there, four thousand years ago. And if there ever was a most regrettable act with the most unexpected consequences, that was it." [12]. The world has already faced the regressive impacts of the two World wars and it is predicted that soon there would be a Third World War.

War is considered as the greatest destruction that can ever occur and in the present twenty-first century, the wars are becoming more aggressive. Compared to the decades in the past, there are lots of awareness and peace treaties signed between countries in the present time. Despite these, there are lot of wars happening and all the wars bring in mass destructions. So, the wars fought between the countries becomes symbolic of the upcoming apocalypse and they can be said that Armageddon still lingers over, especially in the form of nuclear destructions. The words such as "Messianic Time, the Second Coming, a New Beginning, or perhaps a catastrophic Apocalypse, the Ultimate End, Armageddon"[13] mentioned by Zecharia Sitchin are inter related and denote the end of the world. It is just difficult to define the order of the series.

Armageddon, that takes place before apocalypse is also reflected in Mary Shelley's *Frankenstein*. The whole novel deals with the battle between Dr. Victor and the beast that echoes John's verses. It is symbolic of the battle between the good and evil and the creator and the created. Dr. Victor, is considered the creator, as he created the beast and the beast as the created. There arise a conflict, when the created

desires to rise to the level of the creator. The monster in the end of the novel proclaims that it wants to have the life of the humans, but it is refused by Dr. Victor. It says that this longingness and the denial of it, makes it to kill many people related to Dr. Victor. "When I run over the frightful catalogue of my sins, I cannot believe that I am the same creature whose thoughts were once filled with sublime and transcendent visions ...the fallen angel becomes a malignant devil...that enemy of God and man had friends and associates in his desolation; I am alone."

The battle or Armageddon between the beast and the doctor takes place in a ship in the middle of the sea where Dr. Victor dies. This shows the sign of the first victory of evil over good, which would be reversed with the Second Coming of Christ or the Apocalypse. St. John in his list of signs that happen before the apocalypse mentions about the beast from the sea that leads to the final battle of Armageddon. He describes it as, "The dragon stood on the shore of the sea. And I saw the beast coming out of the sea...The beast was given a mouth to utter proud words and blasphemies...It opened its mouth to blaspheme God, and to slander his name and his dwelling place and those who live in heaven."[15].

The beast in the final part of the novel appears from the sea and stands at the shore. Dr. Victor sees the beast standing on the shore and is feared to death. Later, when the beast comes to the cabin in the ship, it kills the doctor and scorns and scolds him. After blaspheming him, it bids farewell to the captain and exits into the sea which is the symbol of the upcoming apocalypse. ""Farewell!". He sprung from the cabin-window, as he said this, upon the ice-raft which lay close to the vessel. He was soon borne away by the waves and lost in darkness and distance." [16]

Jackson Deanchase in his book talks about the three stages of apocalypse as "...conditions in the apocalypse follow the famous Kiibler- Ross grief cycle: Denial (Pre-apocalypse), Anger and Bargaining (Apocalypse), Depression and Acceptance (Post-apocalypse). "[17]. During the pre-apocalypse phase, there are some warnings before the arrival of the apocalypse. For example, a threat will be pre-told or announced by scientists or anybody to spread awareness among the people so as to take some safety measures. In this stage the characters

face denial from others which leads them to move on to the next stage.

The pre-apocalypse condition can be observed in Frankenstein when Dr. Victor Frankenstein makes an attempt to create a human being from multiple dead things. He conveys this as, "...far more will I achieve, treading in the steps already marked. I will pioneer a new way, explore unknown powers, and unfold to the world the deepest mysteries of creation." [18]. Therefore, he collects the different parts of the body from many dead bodies and assembles them and finally gives life to the ugly beast like creature. Before he gives life to the assembled creature, he receives a forewarning from inner voice, but he ignores it. After giving life to the creature, Dr. Victor becomes apprehensive and runs out of the place to get help from his friend. The first emotion that he exhibits to the beast is denial:

I felt the bitterness of disappointment; dreams that had been my food and pleasant rest for so long a space were now become a hell to me, and the change was so rapid, the overthrow was complete...I did not dare return to the apartment which I inhabited." [19] Victor's denial experienced by his creation leads to the second stage of apocalypse, the stage of destruction and horror. In this stage, the real cruelty, extinctions, deaths and much more happen. This stage prolongs for a longer time until some survivors find a solution to the problem created or until the survivors find a better way to withstand the apocalypse. After facing the denial and rejection from Victor, the beast starts to kill all those who are closely related to Dr. Victor. First it kills Clerval, Victor's friend and then kills Victor's brother. Even after the series of killing, the beast comes in search of Victor and asks him to create another creature, a female beast, to be it's companion. When Dr. Victor again denies the beast's request, things go haphazard. Dr. Victor shouts out at the monster angrily and it sets out to take revenge: "It is well. I go; but remember, I shall be with you on your wedding night" [20]

Dr. Victor looks for ways to escape and survive, apprehending the beast's threats. He confesses to Elizabeth about the creation and the killings done by the beast. He informs Elizabeth about the threat and asks her not to be alone. He also tries to postpone his marriage with Elizabeth. On the contrary, the circumstances made him marry Elizabeth in the

meantime. Dr. Victor again tries to evade the beast by cancelling his wedding night and makes Elizabeth stay alone, but the monster appears before Elizabeth and kills her. The monster also becomes responsible for the murder of Dr. Victor's maid and the ill health of Victor's father. During the apocalyptic stage, the monster brings in a lot of destructions in the form of murders.

The post-apocalyptic condition is the last stage of apocalypse. In this stage, some survivors exist but are filled with depression and accept the apocalypse as a part of their life. Jackson Deanchase describes this stage as "...the new nightmare world where only the strong survive. But for how long?" [21]. In Frankenstein, the last survivor in Victor's family is Victor himself and he struggles to survive. He escapes from the monster and goes to the sea and lands in Walton's ship seeking refuge from the captain. Being in an unfortunate and depressed state Dr. Victor shares his story with the captain, which the captain records as letters to his sister. Though Dr. Victor has a fair chance of escape from the monster, he is killed by it. The beast also feels depressed after killing Dr. Victor, his creator. It describes itself as "I, the miserable and the abandoned, am an abortion, to be spurned at, and kicked, and trampled on" [22]. As characteristic feature of post-apocalypse, apocalypse comes to an end with the death of the beast responsible for the destructions. It becomes aware of its mistakes and feels sorry. After killing its creator, it becomes lonely, gets ready to die and goes into darkness.

The Revelation and the prophecies foretold by St. John are not to be feared as threats to humanity, but they must be taken as advises or the foretelling that may help them to live a better life. It is to be noted that Ernst Bloch, a Marxist philosopher, titles his book as The Principle of Hope, in which he talks about the Armageddon in Revelation and the Armageddon at Germany. He draws in a parallelism between them and exposes that The Revelation warns and makes people think of the ways in which the apocalypse can be delayed or avoided. Judith Kovacs and Christopher Rowland in their book Revelation: The Apocalypse of Jesus Christ opines that St. John's prophecies are a source of encouragement for the people who live upto the promises of the Lord and these people may bear witness to the apocalypse. They also compare the current happenings of the world, the different wars and unusual things happening in nature, especially the American war in the twentieth century Latin America. They say that these events are much like the Armageddon described in the Bible and Apocalypse is taught to people in the language of war. They state that, they find this prophecy a source of insight into the situations of oppression and evil and also of new hope for the working out of God's gracious purposes for the whole world. [23]

Mary Shelley's *Frankenstein*, dealing with the arrival of the beast from the land that is created by man's selfishness reveals the dangers behind the insane thoughts of man. Dr. Victor Frankenstein's refusal to the beast's request to create the female beast companion to it, by realizing the aftermath is a positive approach towards apocalypse. He utters, "My duties towards my own species had greater claims to my attention, because they included a greater proportion of happiness or misery. Urged by this view, I refused, and I did the right in refusing, to create a companion for the first creature." [24]. Here, Dr. Victor here becomes aware of the Armageddon and stops the multiplication of the beast that would lead to apocalypse.

Shelley's Frankenstein becomes a fine example of an apocalyptic fiction which foresees one of the possibilities of St. John's visions to become a reality. C. S. Lewis says, "Reason is the natural organ of truth; but imagination is the organ of meaning"[25]. The apocalyptic fiction interpret Revelation along with the current events of the world. They use imagination to visualise the forms of apocalyptic events in their fiction. Dr. David Jeremiah in the introduction to his work Agents of the Apocalypse: A Riveting Look at the Key Players of the End Times, elucidates "When truth is put in imaginative form, it can be driven not only into the mind but also into the heart. Capturing these players (characters) through the lens of story allows Revelation to come to life in a new way. It enables us not only see the overarching truths of Scripture but also to experience them vicariously" [26]. Mary Shelley through her imagination picturisises a possibility of one of the apocalyptic visions in her novel.

Mary Shelley not only foretells the possibilities but also offers solutions to delay or eschew the apocalypse. She subtly tells that people should be aware of their thoughts and discern the good from the bad. Shelley puts forth the moral principle that not all the thoughts of man should be given a form and even if it is given a form, the alternative solutions must be found to put an end to it. Frankenstein becomes a sample picture of the dangerous results yielded by little knowledge and greed. It sows into the minds of the readers the questions like; Are advancements of human mind, science and technology harmful? Should human beings be satisfied with what they have? Is it possible for the human mind to erase the whole world? Shelley communicates to her readers that humans are not the Supreme Being and they must only protect the earth and not terminate it. She also warns that every new idea borne out of human mind, must be analysed of its positive and negative consequences, will lead to disasters and finally advance the Apocalypse.

REFERENCE

- [1] Eliot, T. S. "The Hollow Men". The Wasteland, Prufrock and Other Poems. Dover Thrift Editions, 1998. pp.49
- [2], [11], [15] *The Holy Bible. Genesis and Revelation.* The New King James Version. 2000.
- [3] Lumpkin, Joseph.B . *Angels and Demons: From Creation to Armageddon*. Fifth Estate, 2009. pp. 158.
- [4] Jeffrey, Grant. R. Apocalypse : The Coming Judgement of the Nations. Waterbook Press, 1992. pp.6
- [5] Luther, Martin. *Luther's Works Volume 35: Word and Sacrament.* Fortress Press, 1960. pp.409.
- [6] Thompson, Leonard.L. *The Book of Revelation:Apocalypse and Empire*. OUP, 1990.pp.18
- [7] Vielhauer, Philipp. "Introduction to Apocalypses and Related Subjects". *New Testament Apocrypha*. Editors. Hennecke, Edgar et.al., Philadelphia, 1965. pp. 509.
- [8], [9], [10], [14], [16], [18], [19], [20], [22], [24] Shelley, Mary. *Frankenstein*. Mansi Publishing, 2006.
- [12], [13] Sitchin, Zecharia. The End of Days: Armageddon and Prophecies of the Return. Haper Collins, 2008. pp. 79 & 289.
- [17] [21] Deanchase, Jackson. *Apocalypse and Survival*. E book, 2010. pp. 1-4.
- [23] Kovacs, Judith, and Christopher Rowland. *Revelation: The Apocalypse of Jesus Christ.* Blackwell Publishing, 2004. pp. 250.

- [25] Lewis, C.S. "Bluspels and Falansferes: A Semantic Nightmare". *Selected Literary Essays*. CUP, 1969. pp.269.
- [26] Jeremiah, David. *Agents of the Apocalypse: A Riveting Look at the Key Players of the End Times.*Tyndale House Publishers, 2014. pp.ii (Handbookstyle)
- [16] Transmission Systems for Communications, 3rded., Western Electric Co., Winston-Salem, NC, 1985, pp. 44-60.
- [17] Motorola Semiconductor Data Manual, Motorola SemiconductorProducts Inc.,Phoenix, AZ, 1989.(JournalOnline Sourcesstyle)
- [18]R.J.Vidmar.(August1992).On the use of atmospheric plasmas as electromagnetic reflectors. *IEEETrans. PlasmaSci* .[Online]. 21(3).pp. 876-880. Available: http://www.halcyon.com/pub/journals/21ps03-vidmar