An International Refereed/Peer-reviewed English e-Journal
Impact Factor: 4.727 (SJIF)

Treatment of Science in John Fowles's *The French Lieutenant's Woman*

Animesh Biswas
M.A in English, UGC-NET Qualified
State Aided College Teacher (Category -I)
Dumdum Motijheel College
North 24 Parganas, West Bengal.

Abstract

Charles Darwin's theory of evolution as presented in On the Origin of Species by means of Natural Selection in 1859 demanded a variety of impassioned responses from the British people. The Victorian people confronted previously sacrosanct religious faith. Darwin's theory repudiates Lamarckian evolution by emphasizing that human will is not a force for change, but rather that biological advancement hinges on natural selection. Therefore, evolution theory replaced the powerful almighty God of the Biblical creation. Religious beliefs battled a serious scientific adversary that deeply questioned humanity's place in the universe. Moral values were at stake, new scientific inventions left a dilemma in the minds of the people, who were unable to choose between moral values and science. In this battle the harsh realities of existentialism enabled humanity to grapple, however painfully, with questions of instinct and intellect, of free will and fate, of faith and freedom. Thus morality faced a crisis and this was well reflected in the literature of the age as it is reflected in John Fowles's The French Lieutenant's Woman(1969). Fowles depicts this mid-nineteenth century philosophical battle and an emerging quasi-triumphant existentialist viewpoint through the figure of the Victorian Scientist in his post - modern Victorian novel. Fowles includes several epigraphs in several chapters (in chapter 19, 31 and before the last chapter) to force the readers to analyze these epigraphs via an evolutionary lens. In this paper I plan to deal with this issue of nature and science as treated in Fowles's The French Lieutenant's Woman.

The Victorian attitude to science is ambivalent. While the educated and enlightened class, represented by Charles, warmed up and subscribed to evolution theory, the rest thought the idea to be preposterous. Mr. Freeman differs with Charles when they talked of Darwinism as he could not bring himself to believe that he had descended from Apes whereas Charles had no such compunctions that he has descended from a 'titled' Ape. Charles is not different from other well-adapted animals who succeed in the evolutionary struggle for existence. His hardiness is characterized as the survival of the fittest". When he is effectively disinherited by his betrothed uncle and Winsyatt estate slips from his grasp midway through the novel, he feels like a "victim of evolution". Fowles also introduces Lalage, a perfect symbol of conjoined evolution and existentialism, at the conclusion of the novel.

In conclusion, we encounter a Victorian Scientist who at first may seem understandably swept up in early Darwinist thought. This is true, Charles does pay homage to ideas presented in the Origin of Species, as he is part of Darwin's England. But when he couches much of his tale in

evolutionary language of struggle and survival, he also shows an existential view of existence. He realized that his identity is not solely biological determined but rather is formed by his decision his freedom to choose.

Our society, so eager to be post-Victorian still faces the same age-old questions, the same temptation Charles and presumably scores of other Victorian scientists faced. We choose fight fate small ways even as we acknowledge its pull. Sometimes we succumb as Charles did, sometimes we triumph, as Charles also did. So struggle continues as Fowles holds his text to our faces and we see, as in mirror, ourselves.

Keywords : mutation, doctrine, evolutionism, humanity, fossils, biological transformation.

Introduction

Darwin's Theory of Evolution is the widely held idea that all life is related and has descended from a common ancestor. It presumes the development of life from non-life and stresses a purely naturalistic descent with modification. That is, complex creatures evolve from more simplistic ancestors naturally over time. In a nutshell, as random genetic mutations (1)occur within an organism's genetic code, the beneficial mutations are preserved because they aid survival-- a process known as "natural selection." These beneficial mutations are passed on to the next generation. Over time, beneficial mutations accumulate and the result is not just a variation of the original, but an entirely different creature. This is a theory used for various late nineteenth century ideologies which, while often contradictory exploited ideas of "survival of the fittest ". It especially refers to notions of struggle for existence being used to justify social policies which show no sympathy for those unable to support themselves.

On the Origin of Species was published in 1859, a time when little was known about human life before classical era. Until Darwin and others began to loosen the link between religious doctrine and scientific truth, guesses about the distant past were restricted by Church teachings. So, in the Victorian period, the religious faith began to be challenged sacrosanct religious beliefs. Darwin emphasized that human will is not a force for change, but rather that biological advancement hinges on natural selection. Thus earlier religious beliefs faced a crisis and the Neo-Victorian novelist depict this vehement nineteenth-century philosophical battle and an emerging quasi-triumphant existentialist view point through their novels.

The influence of Darwin's theories on the practice of fiction is well known, thanks to the works of Gillian Beer and George Levine. The affinity between evolutionism (2) and narrative in their mutual reliance on the importance of the origins and on the logic of sequential progression has been identified by both scholars (in the opening chapter of Gillan Beer's Darwin's Plot and Evolutionary Narrative in Darwin and in the introduction of George Levine's). Whereas Darwin's influence on late Victorian fiction was implicit, his presence becomes heavily foregrounded in the Contemporary texts such as, his opinion presents in Thomas Hardy's Tess of

the D'urbervilles (1891), Joseph Conrad's Heart of Darkness(1899), John Fowles's The French Lieutenant's Woman and several other novels. The most obvious manifestations of the Darwinian issue are thematic and speculative(3). When Darwin and his theories are mentioned it is most of the times in the context of the detraction of the Christian doctrine"(4) and of the sanctity of humanity'.(5)

Main Body

Fowles includes scientific epigraphs in several chapters, and each short selection of scientific material forces the reader to analyze Fowles's following few pages via an evolutionary lens. For example, at the beginning of chapter nineteen, the reader learns, "As many more individuals of each species are born than can possibly survive, and as, consequently, there is a frequently recurring struggle for existence, it follows that any being, if it vary however slightly in any manner profitable to itself, under the complex and sometimes varying conditions of life, will have a better chance of surviving, and thus be naturally selected" (Fowles 120). Thus, when the reader next reads of Smithson's mentor, outspoken Darwin supporter Dr. Michael Grogan, and learns his diagnosis of "Tragedy," Miss Sarah Woodruff, he or she is encouraged to evaluate Smithson, Grogan, and Woodruff as evolving beings. A second obvious nod to Darwin opens the text thirty-one chapters later, in which Smithson breaks off his engagement to socialite Ernestina Freeman (who, interestingly, is frightened by the prospect of sexual intercourse with her soon-to-be husband): "I think it inevitably follows, that as new species in the course of time are formed through natural Selection, others will become rarer and rarer, and finally extinct. The forms which stand in closest competition with those underpinning modification and improvement will naturally suffer most" (293). Finally, before the last chapter, Fowles propels our attention forward to the twentieth-century and includes a quote from Martin Gardner's The Ambidextrous Universe, published in 1967: "Evolution is simply the process by which chance (the random mutations in the nucleic acid helix caused by natural radiation) cooperates with natural law to create living forms better and better adapted to survive" (361). Each of the three epigraphs encourages the reader to think about the role of transformation-biological or existential(6)-in the chapter.

Another trace of neo-Victorian fiction's fascination with the theory of evolution is the recurrent presence of fossils"(7). The contemporary novels are littered with ammonoties',(8)tests and ichthyosauruses, whose signification it seems therefore neetful to interrogate. In The French Lieutenant 's Woman Fowles first used a fossile as a catalyst for an epiphany, "a vivid insight, a flash of black lightning" (pg - 179). What does Fowles's evolutionist fiction state here? It negates the idea of progress, stresses the repetitiveness of history and assimilates the present to the past so that the reader is forced to read the condemnation of Victorian prejudice and constraints as an a-temporal tale encompassing the contemporary situation. Naturally this revocation of linear time is also a means to legitimize the project of recapturing the past and to show the partinence of treating in parallel too historical strata.

Fowles also highlights change in his text by emphasizing parallel between his scientist and other biological creatures. Smithson is described in animalistic terms. In The French Lieutenant's Woman, he is compared to the monkeys from which he supposedly descends (or ascends) and also in terms of other animals. He is no different from other well-adapted animals who succeed in the evolutionary struggle for existence. Smithson's hardiness, like that of the proverbial(9) King of the Jungle, 1s Characterized by the narrator as "the survival of the fittest and best, example gratia Charles Smithson" (Fowles 45). The narrator later notes of Smithson, "He himself belonged undoubtedly to the fittest" (134). Like all living creatures, though, Smithson will die and become "one of life's victims, one more ammonite caught in the vast movements of history now for eternity, a potential turned to a fossil" (262). Clearly, Fowles wants the readers of his work to notice the gradual changes in his character. First, they utilize the language evolution in parts of the story "beyond" the story.

In the second scene of the novel the lover, Charles, however, is not so romantic. He has a dry sense of humour and prides himself on being a scientist, having written a monograph on fossils. But Ernestina tells him that she is not at all jealous of his passion for fossils and that he can live in perpetuity with them". She wants to know what transpired between him and her father and Charles's tongue-in-cheek reply is: "your aunt has already extracted every detail of that pleasant evening from me". The differences between Ernestina and Charles is significant here. Whereas she has no interest in Sarah other than the story of misfortune, Charles finds her odd and disconcertingly attractive because she is outside norm. He has a predilection for scientific inquiries and theories such as Darwinism yet Ernestina shares none of this.

In scene III, after much deliberation. Charles has now opted to become a paleontologist-a trait he has inherited from his famous grandfather whose collection has been "gratefully housed by the British Museum". He regularly participates in the proceedings and deliberations of the Geological Society. Charles's uncle does not agree with his political views. Charles is a follower of the Liberal party while his uncle is fond of the Tories. He wants Charles to fight elections to Parliament which the young man has politely refused. He admires Gladstone whom hates. Thus family respect and social laziness conveniently closed what would natural career for him. He sees great scientists like Lyell and Darwin, and great politicians like Disraeli and Gladstone around him and wonders where he fits in because they have polarized the available space between them and moreover, he does not think that he fits in the midst of the greatest galaxy of talent in the history of English literature". But Charles likes to think or himself as a scientist" and has already written a dissertation on the subject but has not really found his true calling in life.

In scene VIII, Charles with all " his overburden of apparatus", is a pioneering modern scientist who calls himself a Darwinist. And like Darwin, he does not agree with the scientific nomenclature of the binomial system. Nature for him is not something fixed or static ; it is "in reality a continuous flux"; their is " an immensely reassuring orderliness in existence".

In scene XVIII, Charles meets Sarah again in Ware Commons. Although he has resolved to avoid her and not "to enter into any conversation with her", he is irresistibly drawn towards her. Sarah's reputation as the French Lieutenant's whore is so bad that he will be tainted by it even if he only speaks her. Yet he cannot refuse her. He knows that what he is doing is dangerous, but is drawn into it despite himself. He sees himself in multiple roles as Sam's master, Ernestina's betrothed and Sarah's confidante which explained "biologically by Darwin's phrase: cryptic coloration, survival by learning to blend with one's surroundings- with the unquestioned assumptions of one's age or social caste".

In scene XX, " Charles now saw a scientific as well as humanitarian reason in his adventure. He had been frank enough to admit to himself that it contained besides the impropriety, an element of pleasure; but now he detected a clear element of duty. In scene XXVII, Dr. Grogan tells Charles that a search party has already gone to look for Sarah and that anybody who brings information about her "or finds the poor creature's body" would be given five pounds it is then that Charles tells him of his involvement with Sarah and his meetings with her. He writes down a note to the Vicar, Mr. Forsyth, that Sarah is safe and that he would get some more news about her the next day. He, however, advises Charles not to go and see Sarah in the Undercliff and the latter meekly, agrees: "I am in your hands". Knowing Charles's allegiance to Darwin and his findings about evolution, Dr. Grogan mischievously asks him to swear on a copy of The Origin of Species. In scene XXXVIII, Charles comes to Oxford street where Mr. Freeman's "great store" is located, and he feels that he would be much better off like "the beggar crouched in the doorway beside him:. Charles is of the opinion that a pursuit of money is "an insufficient purpose in life". He can never be a Darwin or a Dickens, a great artist or scientist; he would at worse be a dilettante; a what -you -will that lets other work and contributes nothing". But he somehow gains "a queer sort of momentary self-respect on his nothingness"; it is his "last freedom-almost". The Victorians' attitude to science is ambivalent while the educated and enlightened class, represented by Charles, warm up and subscribed to Darwin's theory of evolution propounded in his Origin of Species the rest think the idea to be preposterous. Mr. Freeman differs with Charles when they talk of Darwinism as he cannot bring himself to believe that he has descended from apes whereas Charles has no such compunctions- he is descended from an ape and a "titled" ape at that.

The whole narrative is punctuated with Darwin's post evolutionary theory. Charles is am amateur paleontologist researching in fossil rocks to establish his own hypothesis. But he turns out to be a mare "dilettante" as he realizes later. He has merely been dabbling in the subject and to America after breaking his engagement to Ernestina and failure to find Sarah, he gifts most of his fossils to the Geological Museum while he distributes others to students. Now, if we analyze the novel, we see that at first, Smithson's identification with "the fittest" is due partly to his sense or societal position. Smithson is proud of his own heritage and the class in which it places him. He was born into wealth. While joking about his own descent from monkeys, he considers himself a "titled ape" (Fowles 12), focusing on his lineage as redeeming quality. Katherine Tarbox summarizes, "Charles thought .. he was above the rest of his fellows- richer , smarter, better

educated, and all the rest" (80). Smithson adopts the anthropocentric view of humanity common to Victorian gentlemen. He is also able successfully to navigate society's many layers, because as a gentleman, he is gifted with "cryptic coloration” (Fowles 118)--the ability to act appropriately with his servant Sam, his fiancée Ernestina, and Sarah.

One benefit of such a lofty heritage is the likelihood of inheritance when a wealthy family member dies, leaving behind his home and possessions. Thus, when Smithson is effectively 'disinherited" by his betrothed uncle and the Winsyatt estate slips from his grasp midway through the novel, he feels "like a victim of evolution" (Fowles 228), subsequently pressured to work for Mr. Freeman in the city. He has no choice in the matter--or rather, he must face an employment decision for which he feels evolutionarily unprepared--as social evolution begins to favor the mercantile class.

By the final chapters of The French Lieutenant's Woman, Smithson does not rely on class for self-acceptance. While destined to be a Smithson, another Victorian gentleman like his father and his father's father, he is content to be unfashionable,. For example, he adopts Maud, that poem almost universally despised," as his favorite (Fowles 334), even though almost no one else admires it at the time. He chooses to break off his engagement, to accept the Freeman family’s castigation, and to end his relationship with Grogan. He leaves England behind for a time and heads to America where no one knows his lineage. If fate and social evolution allowed him to be born into wealth, his difficult choice to reject his ancestors' legacy has little to do with blind fate.

Sarah was religious but on the other hand she was also erotic, she had two qualities which formed her character - sense and understanding. She was intelligent and independent. She had a sensual expression which was denounced at the time. Although Charles shared enough prejudices with his contemporaries he could not denounce Sarah what was the result of his scientific interest in Darwinism.

The rich men divided his feelings between irony and sentimentality and they behaved like the convention stipulated. In short, the men surrendered, they learned to adopt themselves to circumstances.

The men were influenced by Darwin's theory and some of them occupied with scientific researches. Charles thought that he was a Darwinist, that he belonged to the superior sort and there was an intellectual distance among him and the rest of human beings. He also imagined that he belonged to the most capable people and that this sort had the duty to the less capable. He called himself Darwinist, nevertheless, in fact, he did not understand him. Charles realized the necessity of personal death, each Victorian was aware of this reality. But the idea about common death missed in his imaginations.

By the end of the novel, Smithson loses interest in paleontology and donates his fossil collection to the Geological (10)Museum and students (Fowles 333). His formerly most prized possessions find new homes with complete strangers. "While Smithson finds pleasure in Harvard" (339), there is admiration but no mention of his former lust to possess them. The dead sterility (11)of

nature frozen in the rock no longer holds him in its power. Perhaps the thought of hoarding fossils even repels him to some extent. Collecting tests is a reminder of the past from which Smithson purges himself.

By the conclusion of the novel, Smithson no longer equates devotion to a woman as a mere hobby. He chooses Saran; unlike Ernestina, she is not an automatic ticket to a secure pecuniary(12) future. She is not a plaything. In Smithson's relationship with Sarah, Smithson exhibits a new sense of responsibility. He rejects the sexual double standard of his Victorian world, and he ends his engagement to Ernestina despite the devastating financial and societal ramifications of his decision. In the end, he must cope with existence without Ernestina or Sarah. He cannot "collect" either woman for his own satisfaction. Binns says, he learns that "the reality of another human being can never be possessed in terms of an object relationship" (26).

Smithson cannot "collect" his daughter Lalage either. Fowles introduces her, a perfect symbol of conjoined evolution and existentialism, at the conclusion of The French Lieutenant's Woman. As Smithson's progeny, she is an evolutionary triumph in the passing on of his genes. Onega says, If Smithson is indeed "the last heir of a long line of landed aristocrats.. [and] the last exemplar of a species in danger of extinction" (87), Lalage at least temporarily ensures the survival of his family. She is a new generation. Yet she is also the manifestation of Smithson's deliberate choice to be with Sarah. Further, in one ending that Fowles proposes, Smithson realizes that Lalage is his daughter. In Fowles' final ending, Smithson rushes from Sarah's home without interacting with Lalage and therefore remains unaware of his part in the evolutionary process. In the final chapter, Lalage embodies both Darwinist(13) triumph and existentialist consequences.

The transformation of Smithson's possessive attitude toward science and women takes place against prominent natural backdrops. Thus, the reader cannot fail to notice his relationship to the natural environment and how this relationship changes over the course of the author's tale. Smithson adapts from a self-centered "scientist" and supposed master over the natural environment to a being cut oft from the beauty around him. His sense of superiority disintegrates over the course of his five visits to the Undercliff, with the result that he begins to view his place in the world as rightly much more insignificant.

On Smithson's final trip to the Undercliff, he is no longer a god in control of his surroundings, eager to find and take evolutionary remnants home as monuments to his own evolutionary triumph and ability to collect. The Undercliff's allure is spelled out in spiritual terms as Fowles reaches into the evolutionary past to unearth the place's enduringness. Its longevity is yet another reminder of Smithson's relative insignificance. In America, Smithson expresses new appreciation for his surroundings and their wild untameability. He delights in American nature- not in its cultured estates but rather in "the delicious newness of the nature: new plants, new trees, new birds" (Fowles 339). His experiences in the Undercliff show him that, on an evolutionary scale, he is relatively insignificant no matter where he goes, and he must choose to be a better man. His class, his legacy, and his scientific acumen” (14) -all "gifts" of evolution—no longer permit stagnant living in a Victorian world.

Conclusion

In conclusion, the reader of The French Lieutenant's Woman encounters a Victorian scientist who at first glance may seem understandably swept up in early Darwinist thought. This is true Smithson does pay homage to ideas presented in On the Origin of Species, as he is part of nineteenth-century world. But while he couches much of his tale in evolutionary language of struggle and survival, he also shows an existential view of existence. He realizes that his identity is not solely biologically determined but rather are formed by his decisions—his freedom to choose. By examining the scientists' class consciousness, his sense of his right to "collect" both nature and women, and his relationship to the natural environment, the reader sees that he evolves because his social and natural environment allows him to and because he decides to do so.

Fowles himself "realizes that freedom of will is not absolute, that it is relative to the freedom allowed by the biological, social, and environmental conditions of each of us" (Olshen 11). Then and now, all of us, like Smithson, are shaped by environment, class, and gender. We maintain our interest in evolutionary thought, and we continue to choose between environmental preservation and cultural and technological "advances" that elevate the human over his or her Surroundings.

End Note

1.Mutation is a process in which the Genetic material of a person, a plant or an animal changes in structure when it is passed on to children, etc., causing different physical characteristics to develop; a change of this kind.
2. A gradual development of plants, animals, etc. Over many years as they adapt to changes in their environment.
3. The act of forming opinions about what has happened or what might happen without knowing all the facts.
4. Based on or believing the teachings of Jesus Christ; and the belief that he was the son of God, and God creates all animals and plants.
5. The state of being a person than a god.
6. Connected with human existence, the theory that humans are free and responsible for their own actions.
7.The remains of an animal or a plant which have become hard and turned into rock;, it emphasizes the Evolution theory.
8 A Fossil of a sea creature which gives information about evolution.
9. Used to show to refer a particular proverb or well known phrase, here it refers to a person who has close contact to nature.
10. The scientific study of the earth, including the origin and the history of the rocks and soil of which the earth is made, the origin and history of the rocks and the soil of a particular area.
11. Not producing any useful result.

12. Related to or connected with money: pecuniary advantage
10.The Theory that living things evolve by Natural Selection, developed by Charles Darwin in the 19th century.
14. The ability to understand and decide things quickly and well.

Bibliography

Fowles, John. The French Lieutenant's Woman. Canada: lcador
Jackson E.Tony. "Charles and the Hopeful Monster: Postmodern evolutionary Theory in The French Lieutenant's Woman," Vol.43, (Summer, 1997), pp 221-242.
Binns, Ronald. "On the Unity of Fowles's Fiction." Critical Essays on John Fowles. Ed.Ellen Pifer Boston: G.K.Hall, 1986.19-37
Onega,Susana. "Form and Meaning in the Novels of John Fowles." Ann Arbor: UMI Research 1989
http://www.lib.store.yahoo.net/lib/monkeynote/pmFrenchWomanSample.pdf
www. goliath. ecnext.com/,../Genetic-and-Cultural-selection-in. html
http://www.accessmylibrary.com/...genetic-and-cultural-selcction.html
http:// www.deepbrook.com/portfoliodocuments/flw. html
Darwin, Charles. On The Origin of Species. Cambridge, MA: Harvard University Press,1964
Tarbox, Katherine. The Art of John Fowles. Athens: University of Georgia Press, 1988
Levine George. Darwin and the Novelists: Patterns of Science in Victorian Fiction. Harvard University Press,1988.
Dennett, Daniel. Darwin's Dangerous ldea. New York: Simon, 1995.
Fawkner, H. W. The Timescapes of John Fowles. Rutherford: Fairleigh Dickinson UP, 1984.
Olshen, Barry N. John Fowles. New York: Frederick Unger,1978.
Gutleben Christian. British Nostalgic Postmodernism: The Victorian Tradition and the Contemporary British Novel. New York. 2001
Lynch P. Richard. Freedoms in The French Lieutenant's Woman.
Hardy Thomas. The Tess of The D'urbervilles
Dickens Charles. The Hart of The Darkness. Penguin, 1985
Beer Gillan Dawin's Plot and Evolutionary Narrative in Darwin, George Eliot and Century Fiction. London: Routledge and Kejan Paul, 1983
Gardner, Martin. The Ambidextrous Universe. London: Penguin, 1967