



The Theory of Evolution and Ethics: Moral Non-Realism and its Conflicts with Religious Worldview

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Abstract: *The emergence of Darwin's Theory of Evolution not only influenced the scientific and biological debates, but also strongly affected the phenomena and concepts in the area of humanities. For instance, the evolutionists tried to provide biological explanations for the causes of human's ethical behaviors and their acceptance of specific moral systems in human societies. It's a common conviction among most evolutionists that the ethics have biological origins created by the process of natural selection. In this paper, first, a biological explanation for the emergence of moral behavior will be given and then, two of its prominent distinctions with religious worldview will be referred to. Then, we will discuss that the conflicts of the two approaches can be minimized by providing a consolidated theory that reckons moral realism in the realm of normative ethics can be united with the evolutionary explanations of ethics, of course, if the role of religious propositions in representation of truth of a moral imperative is highlighted.*

Keywords: *ethics - biological evolution - natural selection - cultural evolution - religious worldview*

INTRODUCTION

In 1859, a new interpretation of the diversity of organisms was stated by Charles Darwin in his book, *The Origin of Species*. Darwin based his theory on the natural selection and common ancestry, and relying on natural selection, he explained the biodiversity as well as the property of biological adaptability among the living creatures. In *The Origin of Species*, he also presented evinces proving the evolution of living organisms. Darwin did not use the term "evolution" in the sense used today but he used the phrase "common descent with modification" and other similar expressions to describe the evolution. Darwin sought to explain the creatures' design; their complexity; their diversity; and their astonishing arrangement as a result of natural processes (Ayala 2007, p.27).

Today and in the scientific communities, Darwin's theory enjoys as much scientific reliability as the theory the earth's rotation around the sun does. Many scientists know Darwinian Theory of Evolution as a supplement of Copernicus Astronomical Theory. Kepler, Galileo and Newton had gradually shown that the world is a system consisting of moving material governed by natural laws. Copernican revolution was launched by the publication of the book *On Rotation or Transitional Motion of the Celestial Sphere*ⁱ in 1543, the year of Nicolas Copernicus's death, and was completed by the publication of Newton's *The Mathematical Principles of Natural Philosophy*ⁱⁱ in 1687. Discoveries of Copernicus, Kepler, Galileo, Newton, and others, in the sixteenth and seventeenth centuries, were at the forefront of a new concept and perception of the universe as an entity the movement of which is governed by natural laws. These discoveries showed that the earth was not the center of the universe, but a small planet that rotates a central star; the universe is vast and boundless in terms of time and space; and further that the movements of the planets around the sun can be explained by the same simple rules that are effective in moving physical objects on our planet. Darwin completed the Copernican revolution by generalizing it to biology, that is, he considered the concept of nature as a dynamic regulated material system that can be

described only by human reason without resorting to supernatural agents (Ayala- 2007- pp. 38-42). The emergence of the cultural evolution theory as a new type of evolution, led the evolutionary biologists to resort to natural processes _ biological and evolutionary principles_ to explain the phenomena and concepts in human life. Among these concepts, literature, art, politics, religion, and ethics can be named. One of the most effective and most challenging topics in the rivalry between humanities and biology is the debates in the area of evolution and ethics. Some of these challenges can be referred to as follows:

- Justifying ethical action in humans according to evolutionist explanation of human development
- Exploring man nature according to the theistic interpretation of human essence versus an evolutionist conception of the biological nature of man
- Explaining the influence of religious beliefs on man's moral actions considering the biological process of natural selection
- Reflection on the meaning of being human according to the traditional-religious understanding of human dignity and the biological conception of man

Due to the scope and diversity of debates concerning the evolutionary explanation of morality and its components, all the issues cannot be covered in one essay. So, in the present essay, we have tried to contemplate one of the most significant of these debates that is explaining ethical behavior based on two approaches (biological and theistic attitudes) to morality and human nature. Since the biological-evolutionary explanations are supported by a bulk of empirical and fossil evidences, such explanations cannot be ignored and a special place has to be allocated, by the researchers of ethics, to the biological theories on the formation of human moral sense. Although in dealing with other approaches to ethics, contradictions and challenges would appear, they can be partly overcome by providing a consolidated theory. In this essay, the processing of such a theory will be examined.

The Fundamental Principles of the Theory of Evolution:

Biological or organic evolution is a collection of changes occurring in the characteristics of a group of organisms over generations. Development or ontology of a single organism cannot be called evolution; but, evolution actually occurs in a group of organisms called a population which undergo generational changes. Members of populations are able to have intercourse with each other and breed. If different changes occur within a single population, then the population may be divided into smaller parts. So, sometimes various populations are derived from a common ancestral population. The changes in population attended in biological evolution are the ones transferred, through the genetic material, from one generation to the next. Biological evolution is sometimes trivial, sometimes significant. In general, biological evolution involves all the changes from slight ones in the minor properties to the different forms of a gene within a population (changes that occur from the early organisms to humans) (Futuyma- 2005- p. 2, 3).

In the Darwinian theory of evolution, the origin of new forms of life on Earth as well as the formation of more developed and newer organs and even the formation of human nature and the phenomena related to human, including culture, religion, and ethics, are considered as the organized process of changes affected, controlled, and formed by the natural laws governing them. Darwin's conception of evolution of organisms through natural selection states that some natural differences more than other differences benefit their holders and, thus, the organisms enjoying these differences are granted more chances for their survival and reproduction than those lacking them. As a result, the beneficial differences are expanded and developed among members of a population over generations, while the harmful or less useless ones gradually disappear. Through the theory of evolution and natural selection, it was seemingly possible to provide a scientific explanation based on completely natural methods to describe the origin and diversity of organisms in the world. Along with the progress of biology; gene discovery; and advances in molecular biology, evolutionists have achieved a fuller and deeper understanding of the evolution while they have

perfectly preserved the main structure of Darwin's thought: So, natural selection continues to be the major natural process of evolution. Today, evolutionists believe that natural selection is able to operate only in cases where there is a difference of heredity type. It means that the more the inherited and genetic differences affecting the balance of species in an organic population, the more the possibility of intervention of natural selection and therefore the development of that population. So, evolution can be considered as a two-step process: First, the genetic changes are caused by mutation; second, the selection occurs, over generations, by increasing the frequency of useful traits and the elimination of less useful or harmful traits. The traits caused by mutations are not equally transmitted from one generation to another. Some are repeated more and enjoy greater frequency because they increase an organism's ability to survive or reproduce more than other traits do (Ayala- 2007- p.53).

Human Evolution:

According to the evolutionary account of the creation of man on earth, man is a biological species evolved from non-human species. Ever since Darwin's age, the fossil remains of hundreds of humans have been discovered and the exploration still continues increasingly quickly. Darwin believed that because the closest relatives of modern humans, that are chimpanzees and gorillas, exclusively live on the African lands, the common ancestor of modern humans have probably been in Africa. Thus, in the past 75 years, Africa has been the center of field researches to find the origin of man. Fossils belonging to the human lineage after they separated from the lineage of apes are called "hominid". Big apes especially orangutans are man's closest biological relatives. Every human being has a trillion cells that are of about 300 different types. All these cells are the result of repeated and successive divisions of one single fertilized egg with a diameter of 0.1 mm (about 0.004 inches) and each of the resulting cells have been divided again into two more cells and the division has continued likewise. The result of the first cell divisions is a spherical mass of undifferentiated cells. Following the successive cell divisions, with the appearance of folds and lines in cell mass, cells begin to differentiate, and then turn into a variety of tissues, limbs, and specialized organs of human beings. With each cell division, gene duplication is fully done, so that in each new cell, there are two full genomes, but at the same time in different cells, different groups of genes are active. This feature is very essential for cell differentiation and guarantees their distinction: Nerve cells, muscle cells, and skin cells, are very different in terms of size, shape (including three-dimensional configuration and spatial arrangement), task, and performance. The discriminant activities of genes should continue after differentiation for different cells perform different tasks controlled by different genes. (Ayala-2002-CH. 6)

Distinctions between Human and Other Species

Two most striking and important anatomical traits of modern human are erect posture and large brain. Man is the only species of vertebrates that can walk on two legs and his body mode is vertical. Birds walk on two legs, but the spine is horizontal. In other vertebrates, brain size is markedly proportional to body size, but humans have the largest and most complex brains compared to their body mass. While the brain of a chimpanzee weighs less than a pound and that of a gorilla a little more than a pound, an adult man's brain is about three pounds. In addition to these two obvious features mentioned above, human species has other unique characteristics that distinguish them from other species and has made them the most successful among the others. These important characteristics are:

- Substantial changes in the backbone, hipbone, and leg bones leading to the erect posture and walking on two legs in humans.
- Opposing thumb and arm, and hand and arm changes which make it possible to perform manual skills.
- Changes in the skin and skin glands
- Modification of the vocal tract and larynx

- Reduction of jaw and facial reconstruction

In addition to these anatomical changes, human beings are fundamentally different from other species in the quality of their individual and social behaviors. The distinctive human behavioral traits can be explained in several major items:

- Subtle expression of emotions
- Having intelligence, i.e., the ability of abstract thinking; categorizing concepts; and reasoning
- Symbolic creative language
- Self-awareness and death awareness
- Tool making and technology
- Science, Literature and Art
- A sense of moral and religious beliefs
- Social structures, cooperation, and collaboration
- Legal systems and political institutions

Man is a creature with collective life and socially organized. Compared to primates, one of the most distinctive human characteristics is culture. In its evolutionary sense, the term culture covers political and social institutions; religious and moral traditions; languages; common sense or conventional traditions; art and literature; technology; and generally all creations of human mind. The emergence of culture as a meta-organic model of biological evolution is a human landmark in the past few thousand years. This distinctive human feature has been formed in order to adapt to the environment and transmit the adaptation over generations (Ayala- 2006- p.143-146). Hence, the appearance and development of culture in human societies is rooted in their special privileges which have made this species apt to turn into a socio-cultural being over the years. So, the contemporary civilized and cultured human being has actually arisen from the context of nature and man's biological essence is no different from that of the lower species.

Explaining the Evolution of Ethics:

Looking at ethics from the evolutionary viewpoint, it is still the natural selection and evolutionary processes that have embedded moral sense in the human species: Hence moral behaviors including altruism; sacrifice; empathy and moral living among human beings; and adherence to certain ethical systems have been created through the evolution of social species. Such ethical behaviors are considered as natural selections that increase the possibility of animal's survival and reproduction. However, some evolutionary biologists do not consider the natural processes associated with evolution to be sufficient for explaining all aspects of moral behavior in humans and they believe that some unique characteristics in human has made them quite distinct from other species. In fact, with the advent of theory of evolution, it was seriously needed to consider a new and different foundation in ethics, because in the theory of evolution, human is introduced as a being having grown and evolved at the heart of nature just like the other species and in this respect, bears no particular distinction to other species. Thus, the theory of evolution and natural selection gave rise to distinguished questions on the origin of ethical behavior in the human species. In fact, after Darwin, philosophers and biologists have made a lot of efforts to find an evolutionary process that can justify moral norms in human. The common ground of all these investigations introduces evolution as a natural process aiming to achieve the bio-ethical desired objectives. Proponents of the theories that endeavor to provide an evolutionary explanation for human's moral behavior insist on the idea that evolutionary objectives can give moral value to human behaviors; in

this way that human action is morally acceptable if it directly or indirectly leads to the spread of the evolutionary process and its natural objectives (Baniolo & de-Anna, 2006, p.153).

Dealing with moral norms prevalent in Europe and comparing them with the norms of the South American Indians and those of various regions' natives, Darwin realized a wide variety of ethical practices in different communities. At the same time, he believed that moral behavior as a biologically determined human trait is different from the traits initiated from cultural evolution. For Darwin, diversity of ethical traditions in different cultures has been unique in any geographic location and showed adaptive responds to environmental and historical conditions without necessarily implying that morality is an acquired rather than natural human trait. Thus, in Darwin's view, moral behavior is a variable adaptive response exclusive to the human race and it can be performed in various forms and different instructions. To Darwin, although ethics and its principles are universal, they do not have a supernatural origin, but are rather biological products and the results of natural selection. He believed that different cultures reveal different stages of their moral evolution through a set of moral norms. Darwin ultimately formulated his theory of moral sense in a precise form and on the basis of evolutionary process. In his theory, he implicitly introduced the ethical behavior as "common human behavior with biological origin" that is diversified by cultural differences. In the third chapter of the book *The Descent of Man*, Darwin deals with two important issues on the ethical evolution:

- Ethical behavior is one of the essential characteristics of developed human intelligence; thus, ethical behavior has a biological origin and is determined by the biological processes.
- Moral norms are determined by the collective experiences or human culture. After introducing moral sense as the most striking difference between man and the lower animals, Darwin states his idea on the immediate relationship between ethical behaviors and human advanced intelligence:

"The following preposition seems to me in a high degree probable _namely that any animal whatever, endowed with well-marked social instincts, would inevitably acquire a moral sense or conscience as soon as its intelligential powers had become as well developed, or nearly as well developed, as in man". To justify his claim, Darwin mentions, as examples, different animals and different services they do to the members of their species. Wolves and some other predators, which hunt in groups, support each other when attacking their prey. In some species of ruminants, the males come to the front to defend the herd with their horns when there is a threat or danger (Darwin, 1871, p.75).

Cultural Evolution

Cultural evolution is a distinctive type of human evolution that has dominated over the biological type of evolution because it has created a more effective kind of suitability and adaptation faster than biological evolution and capable of being directed and guided. Cultural evolution is based on cultural heredity and is formed in the light of the advanced development of human brain. So, we can say that in the cultural evolution, the biological processes have exceeded the limits and have caused an adaptation to the environment. This kind of evolution does not work through the conventional biological methods, but through the changes caused by human's manipulating the nature and applying technology in the environment. Other organisms adapt to the environment through genetic changes occurring over generations; fitting the environmental needs; and natural selection. But the capacity to adapt to adverse environments, which are contrary to needs, is only evolved and developed in human species through improving their environment according to their genetic needs (Ayala, 2007, CH.6).

As mentioned before, human beings, since their ambiguous emergence in Africa, have been transformed into the broadest and most abundant mammals on the earth. The reason why it has happened is because cultural adaptation is certainly more effective than biological adaptation. Cultural

evolution has been the main reason of the birth of culture in various societies and civilizations. Meantime, in different cultures, according to the constructed social conditions, ethical systems and laws have been created. Based on the cultural evolution, the moral system currently existing among human beings is, in fact, the same system that has been the focus of this kind of evolution. These moral systems have spread in special communities, but what is certain is that such systems must have been comprehended by those to whom moral systems have proved to be helpful, at least to the extent that they are useful for the advancement and development of stability and prosperity in that community. Some evolutionists believe that the cause of accepting some injunctions in many communities is the domination of civil authority (Such as communities that order to punish or to kill those who commit adultery) or the religious beliefs (Such as the statement that God is watching you and when you do evil, your punishment is hell.) Therefore, they consider the political and legal systems, as well as ideological systems, a product of cultural evolution (Ayala & Arp, 2010, p.333). According to this group of evolutionary biologists, the origin of moral norms in human societies is the cultural evolution. Thus moral norms that is likely to spread, lead to social success and prosperity in human communities. Since ancient times, human societies have had moral systems. Some of these systems have been successful and have spread among communities; while, some have remained constant and unchanged. Also, some others have become obsolete because they have been replaced by other systems or communities using them have been destroyed. The moral systems having survived in different societies are those that have appealed to the cultural evolution and most certainly the members of such communities have had the ability to understand a particular ethical system has been beneficial to their communities, at least to the extent that by increasing stability and success in their community, a particular moral system has given certain advantages to them (Avisé & Ayala, 2007, p.338).

Sociobiology

Studying the social behavior of insects such as bees, ants, and termites was Darwin's research topic in an area that later became known as sociobiology. This field of science sought to use evolutionary mechanisms in explaining and understanding human social behavior. Sociobiology examined the functional aspects of behavior and the earliest stimuli of this school were the biologists who had done extensive studies trying to find a scientific explanation for altruistic behaviors. Origin of altruism and more clearly the reason of the emergence and survival of sterile castes in insects were two problems that Darwin viewed as challenges against natural selection. (Kartwright, 2000, p.26) Darwin's answer to this problem was the term "community selection", which means that if a community is composed of close relatives and kinfolks, the value of sacrifice will increase in that community (Ayala & Arp, 2010, p.328). So, sociobiology can be viewed as a topic in the science of biological evolution that argues the biological development of social behavior in animals and humans and the main objective of this science is to explain how particular behaviors appear in animals by means of strategies and models of biological evolution. These scientists believe that the biological evolution makes human apt to accept certain moral norms compatible with the targets of natural selection and due to this talent, human moral systems confirm behavioral patterns similar to those seen in social behavior of animals. The most common type of mutual assistance among primates is the formation of coalitions. Coalitions are formed through battle with the other fellows (Avisé & Ayala, 2007, p.337).

According to sociobiology, command to honor parents; obscenity of incest; blaming adulterous women more than adulterous men; and prohibitions or restrictions on separation and divorce are among the behaviors reinforced by natural selection. Socio-biologists believe that human moral norms are socially and culturally associated with behaviors developed by biological evolution and the ethical norms protect the behaviors coming from evolutionary origins. They also point out that many moral norms generally accepted in human societies are approved behaviors developed and expanded by natural selection, as in the provisions related to respect for parents, etc. (Ayala & Arp- 2010-p, 330).

Group Selection

In the last quarter of the twentieth century, a naturalist position was adopted by scientists that followed the claim of linking human ethics and biological rules and models. This stance was, in fact, explaining the phenomenon of altruism based on specific combinations of genes: From one hand, natural selection improves the individuals' adaptation and adjustment to their environment; on the other hand, mutation and recombinationⁱⁱⁱ cause genetic diversity. Individuals with changes that improve their environmental adaptation (e.g. better eyesight or higher speed) are able to survive and reproduce themselves more than others. Thus, the adaptive variants increase over generations exponentially; namely, natural selection picks them up and expands them. The amount of this exponential increase can be measured using a parameter called "Darwinian fitness"^{iv} or more simply "fitness". According to this outcome, we expect to see creatures, anywhere, with different adaptive behaviors inherited through genes and able to promote these behaviors. But sometimes, it happens that altruistic behaviors do not follow the conventional and common evolutionary models. Altruistic behaviors sometimes affect the fitness and reduce it. Altruistic individuals share their food sources with other members of the species and may even put themselves at risk to save others. It seems that some members of the species have voluntarily accepted to make sacrifices in order to protect the interests of the group. Some evolutionists finally came to the conclusion that in addition to the involvement and influence of the genes in the process of evolution, there is also a mechanism for selecting the group rather than individual; thus, a trait that may be even harmful to the individual, is possible to be selected and expanded because of its public interests for the group. Accordingly, the origin of religion and moral behaviors is the same selection that observes the group interests because religion is the cause of unity and solidarity among the members of a coterie and increases the survival chances of all members through sacrifice. In this approach, values, virtues and all conservative ideals such as patriotism, piety, and chastity are considered collective values that are recommended in order to guarantee the survival and supremacy of the group (Ayala & Cella condea, 2004, p.174, 175).

Non-Realism in the naturalistic approach^v to ethics

According to sociobiology, understanding the issue that "There is morality." is actually an epigenetic^{vi} expression of our genes, and it is up to the man to build such an understanding and belief in their minds and call some behaviors as morally "good behaviors" as a result. And if human beings do not build and follow such a mentality for a behavior, it means that the benefit of this behavior has not been obviously proved for human genes (Ruse & Wilson, 1986, p.187).

The famous Harvard biologist Edward Wilson in his book, *Sociobiology: The New Synthesis*, (which is one of the most influential books of the past decade in the field of sociobiology), introduces sociobiology as the systematic study of the biological basis in all social behaviors. In the final chapter, titled *Man from Sociobiology to Sociology*, he scrutinizes the social organizations of human societies. In the section, Wilson speaks about ethics, rituals, religion, and culture and emphasizes that scientists and humanists should consider together the possibility that the time has come for ethics to be removed temporarily from the hands of the philosophers. (Wilson, E-1975, p.569).

Like many evolutionary biologists, Edward Wilson believes that sociobiology can provide the key to find the naturalistic foundations for ethics and morality. He believes that what is called ethics is, in fact, our feeling about good and evil, a feeling that is also a part of our biological characteristics as humans. To justify the moral pluralism, this biologist says: "The requirement for an evolutionary approach to ethics is self-evident. It should also be clear, for example, that no single set of moral standards can be applied to all human populations, let alone all sex-age classes within each population. To impose a uniform code is therefore to create complex, intractable moral dilemmas" (Wilson,1975,p: 564).

Responding to the existence of ethical behavior, Wilson states that the purpose of advancing towards ethical evolution in human actions is to provide a device that protects their genes, what Wilson calls the biological nature of human. He writes in his another book, *On Human Nature* (1978):

"Human behavior—like the deepest capacities for emotional response which drive and guide it—is the circuitous technique by which human genetic material has been and will be kept intact. *Morality has no other demonstrable ultimate function* [italics added]" (Wilson, 1978, p: 167).

If we accept Wilson's biological explanation of ethics and, following social Darwinism, believe that the ultimate goal of adopting moral norms among humans is to protect human genes, in such circumstances racism and genocide may be considered as morally good actions in a culture and society because such actions are seen as factors for preserving genes that are thought to be desirable and eliminating the undesirable genes. But, such actions provoke public contempt and hatred and certainly people like Wilson did not mean to justify them.

Michael Ruse, one of the leading contemporary evolutionists, believes that morality is an illusion or impression shaped by natural selection to make us better people. He emphasizes that what man considers as obscenity has no definitive explanation originating from a moral sense with ultimate goals, but it is our feeling that denigrates those actions in a way or another. Through an adaptive fitness and the phenomenon of natural selection, such feelings are institutionalized in human beings to make them good social animals in the direction of human evolution. In this regard, Michael Ruse mentions rape as an obscene action in humans' eyes. He believes that the reason why human beings denigrate rape is not because it is an intrinsically obscene action or because there is a definite moral justification for its obscenity, but it is human feeling that represents rape as an obscene action; a feeling that comes from natural selection and is embedded in human nature to make human beings socially better animals that respect each other's rights (Ruse, 2008, p.109). Due to the fact that human beings believe that morality has an objective independent foundation; Ruse and Wilson introduce the illusion of moral act as a powerful and successful biological adaptive compromise. Ruse writes:

"I would add that the reason why the illusion is such a successful adaptation is that not only do we believe in substantive morality, but we also believe that substantive morality does have an objective foundation. An important part of the phenomenological experience of substantive ethics is not just that we feel that we ought to do the right and proper thing, but that we feel that we ought to do the right and proper thing because it truly is the right and proper thing." (Ruse & Wilson, 1985, p. 50, 52).

Thus, according to social biologists, behaviors such as command to honor parents; obscenity of incest; blaming adulterous women more than adulterous men; and prohibitions or restrictions on separation and divorce; and many other similar ethical commands and bans are among the behaviors reinforced by natural selection, and they have no unchangeable objective reality. It should be noted that among evolutionary biologists, there are scientists who view moral values as derived from cultural evolution and with objective reality at the same time: however, what prevails in evolutionary explanations, particularly in sociobiology, is an unrealistic view towards moral norms which in many cases leads to relativism as well.

Religious Worldview and Moral Realism

The idea that a moral structure has been embedded in nature and our world is built on an ethical foundation is common among many religions. For example, from the perspective of a devout Christian, God has created the world with a project in His mind and apart from some ethical debates in the story of the descent of Adam and Eve; the general Christian idea is that God has created the universe with an inherent moral structure and whoever ignores this inherent structure is unable to have a moral relationship with God and with the universe. A religious person believes that the creation story as

narrated in the scriptures makes us aware of how to communicate with God properly. Hence, we humans are not allowed to play the role of God in the world and change this moral structure because Lord, through His knowledge and wisdom, has already regulated and designed it according to human happiness (Pennock, 2008, p. 417, 422).

In theistic approach to ethics, the moral arguments are used to prove God's existence. In these arguments, the existence of moral laws and moral sense in the universe implies the existence of God that is the supreme legislator of moral norms. Other versions of theistic worldview deem moral laws plausible only by assuming the presence of transcendent God in the universe. Religious approaches consider theism as a comprehensive explanation for justification of ethics and ethical laws in the world and validate metaphysical explanations in morality. Describing ethics, theistic worldview has an organized world in mind where human life is evolved; a world where the growth of human rationality and their confrontation with ethics and objective values take place. In such a universe, a divine system is more reasonable and justified than a naturalistic one (Taliaferro, 1999, p.371, 372).

Besides, in a theistic worldview, moral values are objective and have been embedded at the heart of facts and realities while naturalists believe that values are not rooted in the stable facts, but are created through evolutionary processes that are inherently neither good nor evil.

Moral Realism in Religious Worldview Contradicting Evolutionary Explanation of Morality

Assuming the acceptance of the theory of evolution, we can think that human has acquired, over time and through biological processes, the power to think about moral norms and the ability to choose between alternative ways of performing a moral act. Thus, human's intellectual ability is the main cause of their moral thinking. Since human mind is capable of thinking about concepts such as good, bad, altruism, justice and, sacrifice and since it has the power of choice, they can choose the right behavior among multiple ones. So, it can be said that the biological nature of human leads them to accepting ethical values, norms, and moral judgments and enables them to identify actions as right or wrong. However, the fact that people in different societies and with different beliefs follow particular ethical versions does not just dependent on their biological nature, but various other factors are also involved. As a realist evolutionary biologist considering objective rational foundations for moral values, Ayala believes:

"Even if we come to the conclusion that people inevitably need to have certain moral standards, selection of such standards, which are used for ethical judgments, may be voluntary or dependent on some other abiotic factors. The fact that human needs to have moral values does not necessarily tell us what these values should be, the same way as ability to speak does not determine the type of language we will speak" (Ayala, 2006, p.148). Ayala argues that human's morality is the result of their rationality. In fact, he constructs this argument to justify morality of human species:

A - Moral judgment ability is the necessary result of the evolved rationality.

B - Humans have achieved rationality as a result of evolution.

The result: Human beings necessarily tend to moral judgment.

But, Ayala considers moral norms of human societies arising from specific cultural evolutions that have exclusively happened in each of these communities. And he believes norms that tend to spread, provide preliminaries to the success of human societies. Since the ancient times, human societies have had certain moral norms: some of which, such as the Ten Commandments, have been successful and managed to survive and spread out; while some other norms have been stable and unchanged; and others have been obsolete and removed. The moral systems accepted by cultural evolution have remained and spread out.

Also, the acceptability of different groups of people; special collections; or moral systems is often strengthened by civil and political authorities and by religious beliefs governing human societies which, in turn, are constructed by cultural evolution (Avice & Ayala, 2007, 338).

Hence, we can say that a realist evolutionist can claim that understanding objective moral facts and realities is biologically in favor of human species and that's why human beings seek to identify and explore these realities to guarantee their survival and reproduction. However, if we want to combine moral realism with the evolutionary explanation of human moral sense, we should be able to prove that human voluntary choices in the realm of moral norms are directly related to objective realities which are independent of human mind. The realities, which apart from the different biological and social situations facing human, have objective existence and rational human (in the biological sense) seeks to identify them. For example, this moral law that: "Do not kill your children" is necessary for the biological survival of human species generations therefore, it has been attended by natural selection and during cultural evolution has become a part of the accepted norms of society. But the question is given the distinctive social life of human beings and differences in how they take advantage of their intellectual capacity, can we make sure that people will precisely understand moral facts and realities? Let us consider the same previous sentence: "Do not kill your children." Although the sentence corresponds to the biological survival of human, we have witnessed the killing of children, in some tribes, for various reasons and superstitious myths throughout history: An action that is exactly contrary to the evolutionary purposes and to the detriment of the human species. At the same time, the statement "Do not commit adultery" is well accepted in human norms so that traditional communities often reject adulterous people, whereas the act of adultery, through breeding, is not contrary to the direction of evolutionary process. Thus, we can say that the human moral judgments must be refined and modified to conform to the objective facts. Religious orders and propositions within normative ethics play an important role in refining human moral judgments. Religious proposition act in two ways:

(A) Providing a pattern of ethical norms done through the scriptures and stories of saints' lives throughout history.

(B) The use of religious propositions related to torment and punishment as the results of immoral acts on the one hand and promises of rewards for doing moral deeds on the other hand; a good way to create a connection between the moral judgment ability of human and comprehending moral act reality. Although many people have an initial moral sense, the only factor that leads them towards moral actions is the impact of the God's promises and the fear of His punishments.

So, from the evolutionary point of view, the mystery of religions' survival can be explained through an evolutionary conviction. Thus, from a psychological stance, expecting divine reward and punishment could provide a strong evidence for ethical behaviors because people often need motivation for moral behaviors and religious beliefs are the most effective motivational factors.

Conclusion

According to the biological-evolutionary view of human concepts including ethics and the explanation of moral sense and ethical norms discussed in this paper and comparing this explanation with religious approach to ethics, we can offer a combined theory composed of both religious and natural worldviews. The creation of moral sense and ethical judgment ability in humans could be considered a result of the growth of human rationality and their outstanding intelligence in the course of biological processes. Therefore, humans are capable of choosing the most ethical act among various ones, but to ensure the conformity of a certain ethical system to its objective reality, the phenomenon called religion can be very helpful. Religious systems, on the one hand, improve and refine moral choices and by providing moral-historical patterns, explain how to practice the norms. They, on the other hand, act as a strong

motivational drive to strengthen moral will in human. That's why religion can be justified as a factor improving the living and biological conditions of human species. One of the major causes of religions' survival and stability throughout history can be called their conformity to the biological evolution.

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Endnotes:

ⁱ. De Revolutuionibus Orbium Celestium

ii . *Philosophiae naturalis principia mathematica*

iii . **Recombination:** Genetic recombination is the process in which a portion of the DNA molecule breaks down and in the process of combination, molecules are combined in different ways and create a new genetic map. The process of recombination is very useful in genetic engineering because through this process, genome of different animals can be imported into others; so that a target gene can be removed or added. In pharmacy, many genes are changed through this method. For this purpose, in protein engineering, proteins are changed.

iv . The term "fitness" is used by scientists of evolutionary genetics in two senses: a local concept meaning to be compatible and adapted to the environment and in a second concept meaning to measure changes of the genetic diversity in a species. Species that better adapt to the environment and are, in the local sense of the term, more appropriate, enjoy a better Darwinian fitness; thus, within a few generations, their population increases significantly.

v . The term "naturalism" does not have a very precise meaning in the contemporary philosophy and its conventional use and concept originate from the philosophical debates in the first half of the last century in America. The philosophers who called themselves naturalists actually wanted to integrate philosophy and bring it closer to the science. They insisted that truth and fact are summarized in nature and the supernatural or metaphysics involves nothing; and, in fact, in all areas of investigation even in researches related to the nature of human soul, the scientific method must be utilized. In fact, naturalism allows science to operate as a common and probable trend or a possible path to discover important facts (for example, about the nature of the human soul). Methodological naturalism views philosophy and science as having the same foundation in important affairs and considers the same practical methods for both of them: While the methodological non-naturalism considers philosophy and science as being separate and having distinct objectives and methods. In some areas of the religious philosophy, the methodological naturalism states that religious beliefs do not enter the realm of natural science. This means that a person can be trained and qualified in the natural sciences regardless of having religious beliefs or being an atheist. (Stanford Encyclopedia of Philosophy)

vi . **Epigenetic:** In genetics, the study of phenotypic characteristics related to the cellular physiology has developed. The result is a focus on the external and environmental factors that activate and deactivate the genes, and affect the quality of gene expression of a cell. Thus, epigenetic studies seek to explain the dynamic and active transformation of the potential transcription of a cell. These changes and transformations may or may not have the ability to be genetically inherited. Although the word epigenetic or transgenic is used in the scientific communities for describing genetic processes: Moore, David S. (2015). *The Developing Genome: An Introduction to Behavioral Epigenetics* . Oxford University Press.